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Original Articles.

THE CONSERVATIVE TREATMENT OF ENLARGED PROSTATE.*

By A. MORGAN VANCE, M. D., Louisville, Ky.

In a paper bearing the above title,† read before the Louisville Surgical Society, the author said, in part:

I will discuss neither the etiology nor the pathology, but simply the treatment.

The history we receive when called to a man suffering from an enlarged prostate is nearly always the same: He has been compelled to get up at night frequently to relieve his bladder, and after exposure, or circumstances beyond his control, has been unable to void his urine, the bladder is distended, when he finds urination impossible. His age may be anywhere between forty and a hundred years when this first difficulty arises. Often at this first call a fatal mistake is made by the medical attendant, in the use of a catheter and the prescription for one to be used by the patient. The average catheter, if a soft one, is taken from the inside vest pocket, where possibly it has rested for days or weeks since it was last called into service. If thoroughly washed, it would not recognize itself. Unfortunately, this is rarely done, but on top of its already foul surface is smeared some rancid lard, or other lubricant furnished by the family, and into the bladder it goes. The result is easily imagined. If the attendant carries a pocket-case, a still more diabolical machine is forthcoming—an old, jointed, silver catheter that could not possibly be cleansed—and

*Stenographically reported for this Journal by C. C. Mapes, Louisville, Ky.

†This paper in the original appeared in the *Medical Times*, New York; the discussion which follows was omitted.—C. C. M.

much more damage is done from rough usage. A catheter can not be rendered aseptic by the ordinary patient, and should be used only by one thoroughly acquainted with its dangers, and by him as little as possible, even then. This little instrument kills more old men, and makes imperative the call for grave surgical interference, many times oftener than does the simple enlargement of the gland. It is the first step, in the majority of cases, towards a consultation with the undertaker.

The proper management of this condition depends almost entirely on the education of the patient in matters of prevention. He must learn how to avoid a repetition of the retention, and so insure a complete emptying of the bladder at each micturition.

If there is no organic stricture, in ninety-nine chances in one hundred the bladder can be emptied under the relaxing influences of a hot hip-bath, given in front of a fire in a very warm room. Should this fail, put the patient in bed, wrapped in warm blankets, and carefully pass a series of solid sounds well lubricated with sterilized oil; at the same time give quinine, ten grains, with phenacetine, five grains; wait half an hour and try the hip-bath again. I might be asked, Why not use a catheter instead of a sound? Because the weight of the sound enables you to enter the bladder with less difficulty and less danger; it dilates the canal through the congested prostate, and if the urine is not then voided voluntarily a catheter will follow the sound with less difficulty than if used primarily. Advise the patient to remain in bed, empty the bowels by an enema, if this has not been done before the bath, castor oil to follow, and the next urination will be accomplished with little difficulty. Before discharging the patient, give him full instructions as to his future actions. He should dress carefully, wearing warm flannel underwear, warm, thick footwear, heavy, thick shoes, as, of all the causes of trouble, cold is the greatest. His urinating must be done in a warm room, and not in the yard, clad only in his shirt. His bowels should be kept regulated, and he should be careful in his eating. Alcohol in moderation does good for almost all old men.

He should, by the use of abundant pure water, either carbonated or not, keep the urine pure. Boric acid is the sheet-anchor as a medicament for this purpose, salol coming next; strychnine may be given if there is need of general muscular tone. Opium should never be administered to a man with an enlarged prostate. Often have I known old men to be started rapidly on the downward path by a hypodermic injection of morphine given to relieve pain due to some accidental injury. Opium destroys what little power there is to empty the bladder, necessitating the catheter, and the usual consequences. Advice against old men marrying young women. One old fellow of seventy-six years, I remember, said: "Doctor, whenever

I have anything to do with a girl, blood passes with my urine." Following this idea, there should be absolute avoidance of all aphrodisiac remedies.

Disturbances at night can be reduced by withholding fluids late in the day, but at midnight, if awake for the purpose of emptying the bladder, a cracker with a glass of milk will often help to gain sleep the remainder of the night. Old men get hungry and need food oftener than the ordinary three times a day.

Any intercurrent troubles, such as oxaluria, or the uric acid habit, should be carefully attended to and proper attention paid to the functions of the skin.

If these rules be followed, the majority of these cases will live with fair comfort, and thus avoid the catheter, which, I am sure, is the cause of nearly all the conditions which call for the now too prevalent surgical procedures of cystotomy, castration, the ligature operation and the removal of the gland. Old men do not bear surgery well, and the miserable conditions which make them submit to almost anything are due not to the enlarged gland, but to the tinkering with a viscus, which tolerates any entrance from without very poorly.

The common practice of irrigation is to be condemned; use the kidneys as an irrigator, and better results will come. As a rule, the necessity for getting up at night can be reduced to one time after retiring. I have carried many old men up into the eighties without using the catheter, having been first called to relieve retention. I would almost rather give relief by the aspirator than the catheter, so convinced am I of the banefulness of its use. This may sound simple in the face of recent work in the way of radical treatment of enlarged prostate, but we know our proneness to take up new fads in surgery, as well as in other things. After watching the reports *pro* and *con*, I am inclined to doubt whether there is any good effect other than that resulting from the increased care given these old patients after the operation of castration or use of the ligature. There is no question that the mental effect is often distressing. The operation of removing the gland is one of great difficulty and possessed of considerable danger, and few men will submit to it. Drainage by cystotomy is all right for the relief of cystitis due to infection from without. When cystitis is not present, or will yield to rest and proper treatment through the kidneys, I think it never justifiable. You can always dilate and keep dilated the prostatic urethra. I will mention the case of an old man, aged eighty-two years, in which I was the consultant, where a nasty cystitis was present—due, evidently from the history, to a foul catheter—where the epicystotomy was made very easy by simply cutting down on the point of a large, hollow staff, fully a No. 36 size, which was passed into the bladder without difficulty.

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The vast majority of men who reach the so-called catheter age live out their natural lives without the aid of physician or surgeon. It is admitted that nearly all old men have prostatic hypertrophy, but only a small per cent. have the accidents mentioned, and have to run the gauntlet of the catheter brigade with the risk of having added to their bearable trouble chronic cystitis, urethral fever, perineal abscess, etc., etc. Try conservative management of old men patients, and those of you who are prone to operate often will change your minds.

DISCUSSION.

DR. LOUIS FRANK: Conservative treatment is inapplicable where enlargement involves the middle lobe of the prostate. Such men should be instructed to pass their urine frequently, not allowing the bladder to become full. Where possible the use of the catheter should be avoided, particularly because of the liability to infection. There is little danger of decomposition of residual urine so long as there is no contamination from the atmosphere, even if the condition causing residual urine has extended over quite a period of time, but the bladder should not be subjected to catheterization and thus become accustomed to artificial evacuation; the muscular fibres should be allowed to exert their own force. This is true of the bladder under all conditions. A patient whose bladder has been subjected to distention for some time, becomes unable to pass his urine. In prostatic troubles the use of the catheter brings about the same condition. If there is distention of the bladder, repeated catheterization only makes the matter worse.

I believe dilatation, carried out properly with sounds, keeping the canal well opened, where there is enlargement of the middle lobe, passing the urine before the bladder becomes full and distended, is the better plan of treatment

I know many old men who have no prostatic enlargement. Most old men use more or less alcoholic stimulants, and probably do not take care of themselves as they should. The use of the catheter is merely a habit in many cases, the bladder becomes slightly irritable and every time they desire to urinate they use the catheter, whether it is necessary or not.

While we do not look for prostatic enlargement in young men, even where they practice excessive venery, yet they sometimes have prostatic trouble. I believe these cases do not require the use of the catheter. With proper treatment by local applications of heat, etc., reducing the congestion caused by prolonged erections and excessive intercourse, the trouble will disappear.

As to castration for enlarged prostate: In some cases there may be a decrease in the size of the gland following this operation, but I question whether it is sufficient to relieve the trouble. Much of the good resulting from the operation is

due to the mental impression made upon the patient. Moreover, they probably take better care of themselves after they have had trouble with the bladder, and much of the improvement is due to this fact. The results of castration for enlarged prostate, we will find when we have seen more of these cases will be about the same as in removal of the ovaries for the cure of myomatous tumors of the uterus, though I do not believe the conditions perfectly analogous.

DR. W. L. RODMAN: I have listened to the paper with interest, and in main agree in the conclusions stated. In the majority of cases, however, we will not see the patient in the first attack of retention, and will find the bladder already septic, probably from the use of an infected catheter, and in such cases the best treatment is not only to flush the bladder from behind, by large quantities of water, but to give boric acid internally to sterilize the urine. I believe that boric acid should be used locally as well as constitutionally.

DR. H. H. GRANT: I did not understand the author to clearly indicate that there is at the beginning an acute attack which introduces all these cases; and if we could see the patient in the acute attack, which is a simple congestion of the prostate gland, an inflammation caused by a slight cold, perhaps, and then employ the method of treatment he has suggested, we would probably often obtain relief, in simpler cases where the enlarged prostate is the first cause of the trouble. Many cases get well without the use of the catheter during the acute attack, but the hypertrophy continues, and in a considerable proportion of cases that have come under my observation, there has been no other treatment instituted except such as Dr. Vance has suggested. But at this time the bladder has been greatly distended by long continued residual urine, until it has in part lost its control, its power of contractility is greatly diminished, and no treatment can be looked upon as hopeful of recovery as long as this tendency to retention of urine goes unrelieved.

Some cases are not seen until they are in bed with acute diseases. Three cases which have come under my observation in the last two years, in old men, had no difficulty in relieving the bladder until they were attacked by acute disease, two of them having what is commonly known as the "grip," the other having pneumonia. In both cases of "grip" the catheter was introduced at once, a step made necessary by the condition of the patient, and a large amount of residual urine was withdrawn. The bladder was found not only to be greatly distended but was capable of holding much more urine than its normal capacity. A condition of this kind occurring in an acute disease naturally requires the use of the catheter. As to the introduction of sounds under these circumstances, I did not employ this measure and question whether it would

have accomplished anything, but I introduced in each of these three cases a catheter with a large curve at its distal extremity, the catheter being in one piece, made especially for the purpose, and no trouble attended its introduction. In none of these three cases did I discover that there was any particular trouble resulting from the introduction of the catheter. The patient who had pneumonia died; the other two with grip recovered and one of them was put upon the habitual use of the catheter without any disadvantage. The other one entirely recovered and was free from special trouble of any kind, though I learn he was subsequently attacked with a similar condition and died. During the last attack he was under the care of another physician who had previously attended him, but who was absent from the city when I was called in the first attack. Whether a catheter was used in the second attack or not, I do not know, but I do know that he had a great deal of difficulty with his bladder when he suffered from the grip at the time I attended him, and that he died in a subsequent attack. I judge, from what I have since heard of the case, that about the same line of treatment was carried out during the fatal attack that I had employed previously.

These cases constitute two classes, one in which there has been no treatment of the patient until the bladder is greatly dilated and contains a large amount of residual urine, which perhaps is not septic; and the proposition that Dr. Frank makes is not an unfair one, viz.: that sepsis is not likely to take place in residual urine until infection is introduced from without. What injures the bladder more than this, however, is that poisonous ingredients contained in residual urine are absorbed, and where the patient retains urine in this manner, which may be for weeks or months, which gradually becomes poisonous, by constant absorption of the poisonous ingredients, he is not only unfit for any operative measures, but is unfit to resist even simple catheterization.

In many cases which have not come properly under the care of the careful surgeon, the constitution has been undermined by long retention of urine and the absorption of poison, the patient dies, not so much from the effect of the catheter as from the fact that he is unable to resist disease, and then after simple withdrawal of the urine the man sinks into a typhoid state and dies, the death being attributed to the introduction of a catheter, when the real cause of death is the absorption of poison from the urine. It would be better, of course, if the patient could be relieved without the use of the catheter, but most of the cases to which I have been called and in which I have used the catheter, have been of the class I have just described.

The other class in which the trouble first makes its appearance as an acute condition, can be relieved in no other way

except by prompt catheterization. I have in some cases employed irrigation with boric acid, but the cases in which I have had occasion to do much treatment of the bladder have been very grave and most of them have been unsatisfactory.

DR. A. M. VANCE: I do not claim that conservative treatment will have good effect in aggravated cases. I referred to the walking cases or the typical cases we see at first. In such cases I believe we are all agreed that the conservative treatment is indicated.

If there is a pocket behind an enlarged prostate, unless you put the patient on his belly during catheterization, there will still be inability to get the residual urine.

I believe the main thing is to get these men in good condition generally, then keep the urine pure, and when you have obtained relief by relaxation from hot baths as I have suggested, improve their general condition by tonics, keep them as near par as possible in the way of general health, and I feel sure if this is done and the patients instructed to exercise proper care in these matters, that we will have much less cystitis.

That the urine of old men is more or less ammoniacal has been conceded, and retention has occurred from simple cold. We should teach these patients how to prevent the complications to which I endeavored to call attention in my paper, and I am sure it can be done in the vast majority of cases.

Selections and Abstracts.

SOMETHING RIGHT ABOUT CATGUT.*

By ROBERT T. MORRIS, M. D., New York City.

Several major points and several minor points about catgut will be remembered more easily if we group them separately.

Major Point No. 1.—When buying catgut order the sizes by American standard wire gauge. Different dealers have an arbitrary numbering of sizes and that causes a great deal of confusion. An American standard wire gauge can be found in the hardware shops and in mechanics' work-rooms—and if you order sizes by that definite measurement, the dealer who receives the order can step around the corner and invest a half dollar in a proper little wire gauge which tells him how to number catgut accurately.

Major Point No. 2.—The form of catgut is important because of the ease or difficulty in handling it.

I prefer the sort sold by dealers in watchmakers' supplies. It is used for their bow drills, and goes by the name of "bow lines." Each bow line is one metre in length. As many strands as we choose can be removed from the bottle at the time of an operation, without contaminating the remainder.

Major Point No. 3.—Catgut is satisfactorily prepared by the formal process. The word "formal" is the proper contraction for the word "formalin." The word "formalin" is the trade term for a commercial preparation of a forty per cent. solution of formaldehyde gas in water. A two per cent. solution of this commercial formalin is what we mean when speaking of a two per cent. solution of formal.

Major Point No. 4.—Catgut, raw, oily and dirty, is placed in a jar of water containing two per cent. of formal. The bulk of the water should be three or four times the bulk of the catgut. The catgut remains in this solution for forty-eight hours, and by the end of that time it has become hardened and sterile. It can then be boiled in water without suffering damage if the formal is removed.

Major Point No. 5.—Formal is irritating to the tissues and it destroys catgut unless it is removed. Wash out the formal by putting the catgut in a bowl and letting water from the faucet run through it for twelve hours. Better attach a rubber tube to the faucet and drop one end of the tube in the bottom of the bowl of catgut so that water escapes upward

* A Lecture at the N. Y. Post-Graduate Medical School, Oct. 21, 1897.

through the mass of catgut—carrying formal with the outflowing current. The catgut which was hardened and sterilized is now contaminated by the tap water and it needs to be boiled in water for final sterilization.

Major Point No. 6.—Boil the catgut in water for fifteen minutes.

Major Point No. 7.—Put the boiled catgut in absolute alcohol and use it directly from the alcohol at time of operation.

Minor Point A.—Catgut prepared by the formal process resists absorption in the tissues in proportion to diameter. We may expect that No. 16 American standard wire gauge will resist complete absorption for three weeks, while No. 26 will be absorbed in about a week.

Minor Point B.—If you wish to prepare a lot of catgut with greater resistance to absorption, add one-quarter of one per cent. of bichromate of potassium to the formal solution.

Minor Point C.—Catgut does not dry so quickly on removal from the alcohol if five per cent. of glycerine is added to the alcohol.

Minor Point D.—Catgut placed in alcohol immediately after being boiled carries a good deal of water in its tissue, consequently it is better to abstract the water by placing the catgut in one jar of alcohol for a day and then transferring the catgut to another lot of alcohol for permanent storage.

Minor Point E.—Catgut twists into knots while it is being boiled in water. To prevent this, bunches about the size of hens' eggs are firmly rolled in a gauze bandage and the bandage is tightly pinned before the lot is thrown into boiling water.

Minor Point F.—Boiled formal catgut shrinks to about two-thirds of its former length, and is too elastic to be used with comfort. To obviate this, a strand before being used is pulled out to its original length with the hands, when it suddenly loses its elasticity and remains at its original length.

Minor Point G.—If catgut has been taken out of the alcohol bottle and not used at an operation, boil it again before replacing it in the bottle.

For fourteen years I have depended upon catgut for use in all of my work excepting in certain bone surgery which required the employment of silver wire.

During these fourteen years I have occasionally taken up other materials for sutures and ligatures, but have quickly discarded such materials for catgut again. *Kangaroo tendon* seems to be as good as the best catgut, but it is more expensive and the sources of supply can not be depended upon. I used up a lot kindly given me by Dr. Marcy, and found it excellent, but no better than my own good catgut.

Silk often works out of a wound or scar slowly and causes troublesome sinuses. I have at present in the hospital a pa-

tient whose buried silk sutures have been gradually coming out of an abdominal scar for several years. The excursions of silk sutures are well known. The idea that silk knots hold better than catgut knots is advocated principally by men who tie granny knots. The first thing that a surgeon should learn is the tying of a square knot—but I have seen granny knots tied by at least one distinguished surgeon.

Horse hair, linen, Chinese grass and various other suture materials are advocated from time to time by men who do not prepare catgut well.

Silkworm gut is an instrument of the devil when used for buried permanent sutures. About three years ago I read an article on the use of silkworm gut by a surgeon whom I knew to be a careful observer, and I was tempted to give up my good-enough catgut for something better. In the course of six weeks I employed buried silkworm gut sutures in some twenty abdominal operations for patients who had put confidence in me and had entrusted their lives to my care. At the end of the six weeks I found that some of these buried silk knots were coming out in strange places and some of them are coming out yet—three years elapsed. One patient died as the result of the burrowing of a silkworm gut knot in the pelvis several months after operation. Nearly all of the patients suffered in one way or another. The surgeon who wrote the paper advocating the use of the buried silkworm gut knot has written another paper saying that he is sorry. Meanwhile, other surgeons are bringing discredit upon surgery by taking up this innocent-looking suture material which is so smooth and nice but which refuses to become encapsulated in the tissues, and which comes out of the bladder or iliac vein just after the surgeon has written his paper. A recent advocate of the buried silkworm gut suture intimates that some of us did not use aseptic precaution, and that we did not choose the right sort of silkworm gut. To this I will reply that most of my wounds healed completely by primary union and the knots came out months or years afterward. Further, as a fisherman, I am fully conversant with the subject of silkworm gut and have not been deceived in the quality of the material used. To those who say they have had no trouble with buried silkworm gut knots I wish to say that they have not taken the trouble to find out. The trouble is all on the part of the patients. The patient goes to one surgeon for operation, and to another one to complain. So it requires two surgeons to write the history of buried silkworm gut.—*New England Medical Monthly.*

PHYSICIANS AND APOTHECARIES IN PURITAN NEW ENGLAND.

BY HERBERT C. VARNEY, ST. PAUL, MINN.

Of physicians and apothecaries in early New England it may almost be said that for the first hundred years there were none; that is, in the sense of the word as we understand it.

It must not be inferred from this, however, that our Puritan forefathers were without medical attendance; far from it, but the physicians in those days were the ministers; these were men of education and learning, nearly all of them being graduates of the University of Cambridge in England, and those of a later date of Cambridge in New England.

Many of them had been ejected from their livings for nonconformity, and some of them had taken up the practice of medicine to obtain a living. Others, after coming to this country, in order to support themselves—their pastoral salaries being insufficient—studied a few medical books, and then ministered to their neighbors in both spiritual and temporal things. It was in the hands of such men that the practice of medicine was placed for nearly the first hundred years of New England history.

The first New England physician of whom I find any record is Dr. William Gager, who came out in the spring of 1630, probably in the same fleet with Winthrop. Not being used to life in a new country, he could not endure the hardships of his new surroundings, for his death is recorded at Charlestown in September of the same year. John Dean, or, as he styled himself, "John Dean Chirurgeon" was an early physician of Ipswich, Mass. He died in 1648. His son, Philemon Dean, was one of the early physicians of his native town, renowned both for his skill in medicine and for his standing in the meeting-house. His gravestone, with its quaint Puritan epitaph, still stands in Ipswich.

"Here lies ye body of Doctor Philemon Dean who died October ye 18th, 1716, aged 70 years.

O Lord, by sad and awfull stroaks,
Of man's mortality;
O let us all be put in mind
That we are born to dye.
Grave saint behind that cannot find,
Thy old love, night or morn.
Pray look above, for there's your love
Singing with ye first born."

The last two lines of this stanza were quite popular among Puritan epitaph makers.

Another famous physician of Ipswich was Dr. Thomas Wells, more often spoken of in the old records as Deacon

Wells. He died in 1666. By his will he left to his son "phissic bookes" valued at about nine pounds.

Some of the early physicians who came to New England found the practice of medicine, but a "meene help;" at least Giles Firmin of Boston found it to be such. He came in 1633, and is spoken of in the records as a "godly man, an apothecary of Sudbury in England." In an account of his life written by himself, he says: "Being broken from my study in the prime of my years, from eighteen to twenty-eight, and what time I could get in those years, I spent in the study and practice of physick in that wilderness." The wilderness afforded him but a very "meene" living, for in a few years we find him back in England again, and exchanging the profession of medicine for that of theology, when he became quite a noted minister. He has left one tribute to his early New England neighbors which is worthy of repetition. Before a meeting of divines held at Westminster in 1654, he said: "I have lived in a country seven years; all that time I never heard one profane oath and all that time never did I see a man drunk."

The most famous of the early physicians of Boston was Dr. John Clark, who had also settled for a time at Newburg. He was the first physician in this country to perform the operation of trepanning the skull. Dr. Clark died in 1664, aged sixty-six years. He had a son, also a doctor, who was one of the early settlers of Rhode Island.

James Minott was a physician at Concord, and from the inscription on his gravestone must have been a little of everything else.

"Here is interred the remains of James Minott, Esq., A. M., An excelling Grammarian, Enriched with the gift of Prayer and Preaching, a commanding Officer, a Physician of great Value, a great lover of peace as well as of Justice, and which was his greatest glory, a Gentleman of distinguished Virtue and Goodness, happy in a virtuous Prosperity, and living Religiously died Comfortably, September 20, 1735, aged eighty-three years."

The first women who tried to engage in the practice of medicine in Massachusetts do not seem to have met with very good success. The famous Anne Hutchinson tried her hand at medicine, but on account of her religious opinions was banished from the colony. Another, Margaret Jones, of Charlestown, was indicted and found guilty of witchcraft upon the following evidence:

1. She was found to have a malignant touch, so that whosoever she touched were taken with deafness and vomiting.

2. She practiced physic; her medicines being harmless;

such as anise seed and liquors, yet they had extraordinary and violent effects.

3. She told those who would not use the "physicke" that they would never get well, and accordingly their diseases continued, contrary to the efforts of the physicians and surgeons.

4. She had the witches' marks.

In spite of her protestations of innocence, poor Margaret was hanged as a witch on Boston common in 1648. Those were the days when this law was on the statute books: "If any man or woman be a witch, that is, hath or consulteth with a familiar spirit, they shall be put to death."

Almost without exception in all the early settlements of Massachusetts and Connecticut the practice of medicine was carried on to a greater or less extent by the ministers. This union of medicine and religion was called by Cotton Mather "an angelic conjunction." The first medical treatise published in America was by one of these minister-physicians, Thomas Thatcher, and is entitled "Brief Rules for the Care of the Small Pocks," 1677.

Probably the most famous minister-physician was the Rev. Michael Wigglesworth, who was born in Yorkshire, England, October 28, 1631, and was brought to this country when a very young child. He entered Harvard College in 1647, and graduated with the class of 1651. After his graduation he was appointed a tutor at the college, and during that time prepared himself for the ministry and was ordained minister at Malden in August, 1656. After his ordination his health became so poor that he had to spend some time abroad, and was never of a very strong constitution. For nearly fifty years he served the church at Malden faithfully, both as minister and physician, as Cotton Mather said of him, "lively unto death." He died in 1705. Wigglesworth will always be remembered for his production of that sulphurous poem the "Day of Doom," which was very popular in its day, and also of a book called "Meat Out of the Eater." An extract from the "Day of Doom" may be interesting. The following is one describing the punishments of hell:

"For day and night in their despite,
Their torments smoak ascendeth;
Their pain and grief have no relief,
Their anguish never endeth;
There must they ly and never dy
Tho' dying every day;
There must they dying ever ly
And not consume away."

His death was lamented by Cotton Mather in the following poetical effort:

"His pen did once meat from the eater fetch,
And now he's gone beyond the eater's reach;
His body once so thin was next to none,
From hence he's to unbodied spirits flown;
Once his rare skill did all diseases heal,
And he does nothing now uneasy feel;
He to his paradise is joyful come
And waits with joy to see his Day of Doom."

His gravestone, bearing the following epitaph, still stands in the Malden burying-ground:

"Here lyes buried ye body of that faithful servant of Jesus Christ, ye reverand Mr. Michael Wigglesworth, pastour of ye Church of Christ at Maulden, who finished his work and entered upon an eternal sabbath of rest on ye Lord's Day, June ye 10, 1705, in ye 74 year of his age.

"Here lyes in silent grave below,
Maulden's physician of soul and body two."

Even in their dual capacity, these minister-physicians had a hard struggle to obtain a living, having to take their pay in anything they could get—cordwood, codfish, grain and such like produce. The records show that they were very poorly paid. A physician's fees were only six pence a visit at Hadley and Northampton in 1730, and eight pence at about Revolutionary times. Tooth-drawing cost eight pence extra. One independent New Haven doctor charged a shilling a visit, and got it.

A good idea of the physicians' fees in England a little earlier than this may be obtained from the funeral bill of John Dudley, who died in London in 1580. He was a brother of the Thomas Dudley who came to New England.

To Dr. Astlow for his attendance during his sickness	£6.
To the pottacarie for his bill	5.
To Dr. Smith and Dr. Hector at the oapening of the bodie	6.
To the surdgeons for oapening, searing, etc., of the bodie	7. s5
To a poore man that made an epitaphe	.s10

The total of his funeral expense was about three hundred and ten pounds. From this it will be seen that only about twenty-five pounds were for medical attendance, including the ten shillings that went to the "poore" man that made the epitaph.

The small fees of the olden time led the physicians to adopt all kinds of expedients to help them to get a living; most of them compounded their own medicines and sold them to their patients; this may account for some of the mammoth doses of those days. Others were innkeepers, schoolmasters and storekeepers; one was a butcher, and this in more ways than one.

A noted physician was Dr. Nathaniel Ames, of Dedham. He was doctor, innkeeper and also wrote almanacs. In 1725 he began the publication of his almanacs, and continued to do so for thirty-nine years. His house of intertainment was at the sign of the Sun, eieven miles from Boston.

Even the quack soon found his way to this new land. "Runnagate chyrugeons" and "physickemongers" they were called. In 1631 Nicholas Knapp was fined and whipped at Boston for pretending to cure the scurvy with a "water of noe worth" and which he sold "att a very deare rate." The same treatment might possibly be used with advantage on some of their nineteenth century descendants.

With the doctors making and selling their own medicines, and the people preparing many at home, there was no room left for the apothecary, and we find none at all until 1761, when Thomas Hanasyd Peck, of Boston, advertises "plain buttons, black thread, cards, lace and small bowstrings, verdegrees, copperas, men's and boys' felt hats, castor and logwood." I have found one advertisement of that time which may be that of an apothecary, in the *Boston Post-Boy* of Sept. 8, 1760:

JOHN LORING.

At his shop near the Great Trees. A fresh and General Assortment of Medicines, both Clinical and Galenical. Spices of all sorts; likewise Redwood, Logwood, Allum, Copperas, Brimstone, etc. N. B.—True Lockyer's Pills, Bateman's Drops, Stoughton and Duffey's Elixir, etc., etc.

Through this conglomeration of doctoring, preaching, butchering and tavern-keeping, a great deal of the science of medicine in this country has passed in its evolution down to the present time. Looking back at that little handful of resolute men who first obtained a foothold on the rock shores of New England, we can only be amazed at what has taken place since then. We should also be very thankful, too, for it was through the struggles and trials and efforts of our Puritan forefathers that many of the comforts and blessings we now enjoy have been produced. Some of them foresaw the future of this country in their day, and were glad. I can find no better closing than the prophetic words of Edward Johnson, in the *Wonder Working Providence of Zion's Saviour* in New England, 1654. "The Lord Christ intends to achieve greater matters by this little handful than the world is aware of."—*Medical Standard.*

MEDICINE IN CHINA.

BY V. P. SUVOONG, B. D., M. D., SHANGHAI.

(Abstract from the China Medical Missionary Journal.)

Medicine as practiced by the Chinese is in a deplorable condition. As in every department in life in China, so here also too much blind reverence is paid to old ideas. As a general thing a very few Chinese medicoes are ever educated or know anything of such a book as Ts'o-pun, an old Chinese Materia Medica, while the vast majority of them know how to write out a few old stock prescriptions copied out of some antiquated document that came down to the family as an heirloom. I know one man who was engaged in the Kiangnan Arsenal as a petty overseer, who on being dismissed from his post, was a long time out of a job; at last he made the acquaintance of a certain Buddhist priest who had written a copy of some secret prescriptions. He stole this copy, and after a few nights' application and research in that dirty dog-eared volume, he swung out a signboard informing the public that he was ready to guarantee a perfect cure for any ailment that humanity is heir to. This happened in Shanghai, and there are hundreds of similar cases where an ignoramus imposes on the public without being exposed to ridicule.

The better class of Chinese doctors have served their time in the office of their preceptors, who, however, never give lessons or readings in anything—indeed, there are no text-books to go upon. They are more like assistants, who make themselves generally useful in an office where the anxious ones look over the prescriptions and listen to whatever their chief may have to say on any given case. A Chinese medical student in the proper sense of the term has never existed. They are all charlatans, jealously guarding a few empirical ideas from the public.

One sometimes hears of the Imperial College of Medicine in Peking. A foreigner, on first hearing of it, is sure to make an egregious mistake from its high-sounding name, which leads him to suppose that it is some institution like the Royal College of Physicians and Surgeons in the West. It is only a handful of self-styled doctors like any of their brethren in Shanghai, except their good fortune has placed them in a comfortable position where they have nothing to do but to put on an air of being learned and skillful. Their anxiety commences, however, with the Imperial cough or colic. They have no lectures to give, as there are no students, and they need not write articles for medical journals, as there are no readers.

The Chinese apothecary does a large business, as can be seen from the many hongs and shops dealing in drugs in any city in China. The doctors prescribe large bowlfuls of decoctions

for any complaint, so that a constantly ailing and dosing man is nick-named a "decoction pot." That is their favorite method of dispensing, though pills, powders, etc., are not neglected. Consequently a druggist must have a large supply of herbs and roots on hand to meet the demand, and he ransacks creation for the odds and ends in his shop. Of the drugs one may have some idea by looking over the advertisments in any of the Chinese newspapers published in Shanghai. I will mention one as an illustration: The advertiser in the Chen-fuh-lan-tang shop, which, has offices in Canton and elsewhere in China. A free translation of the advertisement here will show the depth of darkness in which the Chinese mind is yet enshrouded in respect of medicine:

Recently Honkong and the provinces of Kwangtung being visited by the plague, the Provinical High Authorities have published a prescription called Plague Cure which is infallible. Our shop has already prepared this medicine for the two great benevolent institutions in Canton, where it has been used with invariable success. In this prescription there is one ingredient called Son of Stone Dragon, which is found in the mountains in the province of Chekiang. Through the agency of our branch office in Hangchow we have obtained a superior variety of this stony son of a Dragon, and together with other valuable drugs we have made this mixture. During the compounding, we have reverently said a thousand prayers. Now we offer this medicine to the public. Herewith is an illustration of this stony son of a dragon as our trade mark. The medicine is not only unusually effective against the plague, but it is also infallible against different kinds of cholera, vomiting, diarrhœa, colic, apoplexy, sunstroke, asphyxia, typhus and typhoid fevers, ague, diphtheria, liver and stomach aches, tetanus in children, surfeiting, smallpox, poison, malaria, all sorts of tumors and inflammatory poisons, etc., etc. Shanghai being particular in its sanitation against plague, we have specially prepared this medicine as a valuable weapon in the hands of committees for preventive measures.

(Signed) CHEN-FUH-LAN-TANG.

I wonder who discovered such potent virtues in the little rascal of a lizard, which in its native province of Chekiang, as here, is always regarded with disfavor.

For various female complaints and diseases what are called Dragon and Phœnix Pills are largely sold in the Canton shops. These are coated with wax, either white or yellow, and of the size of an English walnut. Their efficacy is, of course, lauded to the sky, but nearly every woman that I have seen in practice has told me that she had tried them and found no improvement therefrom. No doubt they are composed of some such simple drugs as aloes, myrrh, etc., which if appropriately applied, of course have their uses; but to make them a panacea for all the complaints of women, they fail egregiously. The Chinese druggists in their anxiety to make money advertise drugs that can even restore the virile power in a profligate, and cause the sterile to bear offspring.

But there are stuffs which the Chinese druggists do conscientiously collect, and with much expense and labor, but which are nevertheless inert and useless—as tigers' bones, bears' legs,

harts' horns, etc. Tigers' bones are ground into powder and used in plasters for internal injuries, bears' paws are boiled to a jelly and used as a powerful alterative for the weak and aged. Harts' horns are sawed into thin discs and boiled down and given for renewing wasted vitality. A young horn is considered as particularly valuable, when it is a little ruddy and somewhat translucent. I can not make my old friends believe that its virtue consists in ammonia, any quantity of which can be obtained almost for a song in any foreign drug-store. They rather think that I am a greenhorn myself and not particularly valuable either.

When every available drug in their reach has been pressed into service and found wanting, then they resort to superstition, or if I may be pardoned, to a "faith cure!"

Unfortunately, superstition often retains its victims long in its thraldom. But sometimes, however, it gives a sort of pleasant rounding to the recovery of an important member of a family, deceptive it surely is: as, for instance, a father gets well from severe illness because his filial son cuts a piece of flesh from his arm and puts it in the decoction pot to impart special virtue to it. Every year the Peking Gazette gravely makes an honorable mention of filial sons and dutiful daughters-in-law who have thus maimed themselves in their loving devotion to their parents. The efficacy of the human flesh in this connection is widely believed in by all classes here.

In the reign of Hein Fung in the early fifties there was a local rebellion in the Shanghai city. During that atrocious period many a man was slaughtered and butchered and his gall bladder was taken out and invariably swallowed by some savage chieftain with the idea that it would brace up his courage—this latter being said to reside in the gall. The Chinese word for bravery means a large gall.

In the history of the Three Kingdoms mention is made of a distinguished general, who, on an eye being struck out, immediately picked it up and said: "This is made of my father's essence and my mother's blood, I dare not throw it away," and forthwith he swallowed it.

These are instances showing that from time immemorial the people of China have a notion of the peculiar virtue of the human body. And not only so, but even excrementitious and effete matters are sometimes used. Thus, solid fæces are selected and moulded into the shape and size of a chestnut and hermetically sealed in a jar and buried in the ground for a number of years. Then they are taken out again, when they have a gray color and devoid of smell, and they are then carefully covered with gilt and stowed away to be called for by some eccentric medico, when they are euphemistically denominated "Golden Beans." Their ultimate destination is the decoction pot, and the patient knows nothing of it while taking

it. A human placenta is sometimes cleaned, cut up in pieces and given to a white duck to feed, and after a few days the latter is killed, its insides taken out and thrown away and the duck is cooked and given to the consumptive to take. Cat's placenta is roasted to ashes on a tile and taken in a warm drink, also for consumption. Young boy's urine is taken in samshu and sugar, though parents generally object to this, having an idea that it will have a reflex action in shortening such a boy's life. Of course there are many other things infinitely more unspeakable that are, or may be used, in the despairing hope of life, but the above I know to be facts from personal observation.

But are there no Chinese drugs and remedies that are worthy to be rescued from oblivion? Certainly there are; indeed many Chinese drugs and remedies have already been naturalized in the Western pharmacopœias, such as rhubarb, camphor, mercury, musk, etc.; and there are some empirical methods that will surely reward a trial, but are either not known or are ignorantly sneered at because they are of Chinese origin, for instance: When a child has eaten too much or otherwise brought on discomfort of the abdomen, nothing is so effective as to put ¼ or 1 oz. of pi-siau in a thin cotton band and apply to the abdomen. By the next morning the stuff has almost entirely disappeared, very likely by absorption, evaporation or mechanical loss, the abdomen has subsided and the child is well. This stuff is native sulphate of soda, sold in all the Chinese drug-shops for this purpose alone. This is a pleasant way of using a cathartic, which it most certainly is. It is easily done, and effective, and done, too, all over China. Another empirical method is that of scraping or pinching the skin for mild cholera, sunstroke, etc. This consists of a cash scraping the back till it is striped like a zebra—only in red. It looks barbarous, but its effect is instantaneous. In the sickly months of the summer, when one feels out of sorts, with perhaps a touch of colic, then let his spine be first scraped clear down to the lumbar region, then down the median line in front and on either side of the ribs he will feel the charm right away. Of course, this is nothing more than counter-irritation, it brings the blood to the surface and is redistributed. But no medicine in the pharmacopœia can give such rapid and happy effects as this under the circumstances.

A milder method is that of pinching the skin of the neck till it is covered with red vertical stripes. There can be no mistake in these methods being useful, as I have experienced them myself many times in these nearly twenty years. With the exception of these few gleams of phosphorescence, it is all darkness in the medical horizon of China.

But thanks to the self-denying efforts of the medical missionaries of all denominations, the healing art is now being

taught in many parts of the empire. In the north there are medical students attached to the St. Luke's Hospital in Shanghai, the hospital at Soochow and also in the school of the Presbyterian Mission in Shantung. The latest additional effort is the medical college in Tientsin under the immediate patronage of the Viceroy Li.

Such a medical school will therefore confer an incalculable blessing on China. The Chinese may blindly reject the Christian religion, but they have never refused the offices of the Christian physician; some will receive Christianity; but all will accept medicine.

VARICOSE ULCERS OF THE LEGS.

Simonelli (*Revue Medicale*, Oct. 6, 1897) recommends a powder composed of fifty parts of chloride of sodium and five parts of pulverized menthol. Both substances should be in the form of an impalpable powder, and intimately admixed.

CONGENITAL ABSENCE OF THE PATELLÆ—STIGMA OF DEGENERACY.

H. N. Moyer contributes to *The Lancet* of November 27, 1897, the description of a patient with congenital absence of both patellæ, presenting extraordinary signs of degeneracy. His head, which was large, was decidedly asymmetrical, the left half of the face being somewhat larger than the right. The skull was exceedingly irregular in its osseous conformation. Both ears were very small and irregular and the ordinary oracular markings not very apparent. There was microphthalmus of the right eye with apparently congenital haziness of the cornea. Most of the teeth were lost, but the dental arches were well formed. The arm and forearm were fairly well-developed, but each thumb was broad and both thumb-nails had a central groove. There was a rudimentary finger on each hand. Over the lower end of the sacrum was a fold of skin which rose somewhat above the surrounding level and concealed a slight opening in which a probe could be passed for a depth of about one-fourth of an inch. The testicles were undescended. The thighs were well-formed, with the exception of the absence of the patella. The knees had a certain amount of permanent flexion, and the patient walked with them at nearly a right angle with the thigh. The feet were turned inward, so that if the leg was extended and he was standing upright, pressure would be made directly on the outer side of the foot. In the position in which he commonly moved, with the body bent upon the thighs, and the legs flexed upon the thighs he brought the soles of the feet in this position nearly parallel with a flat surface.

THE VALUE OF EXPERT TESTIMONY IN MEDICO-LEGAL CASES FROM THE MEDICAL STANDPOINT.*

BY A. W. HENCKELL, M. D., ROCHESTER, NEW YORK.

I have selected the subject, "The Value of Expert Testimony in Medico-Legal Cases," not for the purpose of giving a lecture on medical jurisprudence, but with the object of bringing to your attention a few salient points gathered from some recent criminal cases relative to expert testimony. I cite the cases of which my paper will largely consist for the purpose of proving that medico-legal testimony, as given before our courts to-day, is little less than a farce and is bringing dishonor and chagrin upon the experts representing our profession, and, worse, contempt for the profession itself.

Wharton defines the "expert" tersely as "such men who are experienced in a specialty."

The present form of examining experts in insanity cases I will not dwell upon. The mode of examining experts is, usually, in the form of a hypothetical question, put and paid for by the side calling the experts; in other words, the professional man testifies to certain opinions (which a man can change at will) for the benefit of the highest bidder. Has the medical fraternity reached so low a level as to forget the duties it owes to truth and veracity?

The expert should be called for the purpose of assisting the law in the obtaining of justice for the prisoner, to assist the court and elucidate certain points to the jury. The hypothetical question has many objections urged against it. Hornblower says:

> It is claimed, and with much truth, that the hypothetical question assumes as proved whatever the counsel putting the question has endeavored to prove, and combines insignificant with important circumstances and alleged facts, supported by slight and perhaps worthless testimony, with other facts of which the proof is strong and convincing, while omitting still other facts of equal or greater importance which may be overwhelmingly established by the other side.

Expert testimony based upon such one-sided hypothetical questions is almost, of necessity, favorable to the questioner, and the true remedy is that already adopted by the laws of this State in insanity cases—the appointment of a commission of experts.

The primary object of expert testimony is not to prove opinions but facts, in the shape of rules of science or art, generally recognized by those who are especially instructed in such art or science.

Lord Campbell stated, in the Tracy Peerage case, that "skilled witnesses come with such a bias on their minds, to

*Read at the thirtieth annual meeting of the Medical Association of Central New York at Buffalo, October 19, 1897.

support the cause in which they embark, that hardly any weight should be given to their evidence."

Judge Davis, of the Supreme Court of Maine, stated: "If there is any kind of testimony that is not only of no value but often worse than that, it is, in my judgment, that of medical experts."

A certain justice of the Supreme Court of our own State, in speaking of witnesses, once said: "There are three kinds of witnesses—liars, damn liars and 'experts.'"

From this it will appear how necessary it is for medical experts to free themselves from all bias and swear only to the truth, the whole truth and nothing but the truth, without fear or favor.

These criticisms are not always merited, and, if medical opinions were free from bias, such opinions would be of inestimable value, as they are in Germany and France, where the expert becomes an official and a component part of the judicial system. The objection to the expert in this country is that parties pay and retain their own experts. The question of the compensation of the medical expert is one which has attracted the attention of the profession. Although most writers on medical jurisprudence make mention of the fact that they should, or must, receive remuneration, the question, I believe, has never been decided in this State. I have the opinion of one of the justices of the Supreme Court to the effect that the question has never been judicially settled. He stated, as a reason, that no physician would risk being fined for contempt, but would rather answer the question.

In the recent Carlyle Harris trial, the most eminent experts in the State(and out of it) were called to give evidence. These men testified to facts, so-called, but they were diametrically opposed to each other. Of what value was this testimony in the obtaining of justice?

Again, in a recent murder trial in New York City, experts were on the stand, day after day, for the purpose of deciding the question whether or not the presence of human blood could be positively determined; but here again it was of no value to either side.

Some here will recall a case of alleged rape that occurred in the town of Gates, Monroe county. The Humane Society, through its agent, tried to convict—I can say with perfect frankness, he tried to convict—justice was not thought of, even by the officers of the Humane Society. At the hearing before the justice of the peace a female physician was put upon the stand as an expert and testified that she was of the opinion that this little ten-year old girl had been assaulted; she was willing to say this on the ground that the hymen had been ruptured, the vagina large and roomy. It would seem impossible that a physician, at this late day, could swear that the absence of

the hymen was proof positive of unchastity in the individual, but such was the case. In this case the Humane Society was over-anxious to convict. Their own expert, Dr. Moore, maintained that the examination revealed that the girl had not been assaulted, and on that score advised the Humane Society's attorney to refuse me an examination, I having been called by the defense.

Why, in the spirit of fairness, did this society not endeavor to assist in freeing the man from this accusation after their own expert's opinion had been expressed? Why was not Dr. Moore called to the stand? Why did not the prosecuting attorney ask for the discharge of the prisoner on account of the lack of evidence? But none of it. He insisted that the accused be held for the grand jury; that he be lodged in jail, obliged to undergo the anxiety of a trial, because this woman "expert" swore that the girl had been misused. Was expert testimony of value here? Did it accomplish the ends of justice? No; decidedly not. It was a disgrace to the society prosecuting and unfortunate that the profession could not have forced its testimony. It was not until this man was brought to trial that one of the plans I advocated was tested—namely, the appointment of a commission. Three experts, appointed by the court, unbiased to the prejudice of the prisoner or the financial considerations from either side, examined the girl, and their finding caused the immediate discharge of the prisoner.

I maintain that this, or a similar plan, should be adopted in all legal proceedings. That is the practice in France and Germany, and few indeed are the objections urged against it.

In the Benham case the medical expert testimony was again brought into ridicule, to such an extent that the jury practically ignored the testimony of all the experts. The reason for this was very apparent, in that the jurors were not familiar with chemistry and its intricate technicalities. It is even asserted that whilst an eminent expert was giving his testimony a number of jurors fell into temporary somnolency.

Again, in the Luetgert case, now pending, we find the experts at war with each other and exposed to the ridicule of the public. The aptness of some expert witnesses in murder trials is exemplified in this trial. One of the leading esteologists for the defense on being shown the skull of a mammal pronounced it as being the skull of a dog, describing in minutest detail its complete structure. After finishing his explanation the prosecuting attorney informed him that it was the skull of a monkey. Recognizing the pit he had fallen into he humorously remarked it was probably a monkey-faced dog.

Considering the various phases of expert testimony one can

readily see that a remedy must be sought for and speedily put into practice if the honored status of the medical profession is to be maintained. In my opinion there are two ways out of the difficulty. The first, the appointment of a commission by the court (I have already alluded to it in the early part of my paper); the other, the appointment of a commission of experts to receive the contentions of the experts of each side, and they to decide and present their findings as facts to the jury and not to be subject to review. In my opinion the latter plan is freer from criticism.—*Buffalo Medical Journal.*

THE RELATIONSHIP OF PHYSIOLOGY PHARMACOLOGY, PATHOLOGY, AND PRACTICAL MEDICINE.*

BY T. LAUDER BRUNTON. M. D., LL.D.

The desire for knowledge which is common to the lower animals and man, savage or civilized, and which has induced members of this Congress to come from the ends of the earth in order to gain information, must have led primitive man from the earliest times to study the great problems of physiology, the nature of life, of growth, of reproduction, and of death, as well as to notice the connection of the latter with mechanical injuries, such as the wounds inflicted by clubs and spears or by the teeth or claws of wild beasts. Next to the problems of physiology come those of pharmacology by which I mean the poisonous or remedial action of various substances—mineral, vegetable, or animal. A knowledge of this subject is found even amongst the lowest savages and is of the greatest use to them, for it enables them on the one hand to avoid eating things which may cause discomfort, pain, or death, and on the other, to obtain food by poisoning the waters and thus catching fish, or by poisoning their arrows to kill game which would otherwise escape.

Closely associated with the knowledge of the poisonous is that of the curative powers of herbs, and it is possessed by animals as well as man, for cows avoid noxious plants, and dogs will every now and again eat grass apparently as medicine. Primitive people use various substances as remedies in disease with more or less success, and one of the most extraordinary points in their practice is that they seem to some extent to have forestalled the newest researches on venins, antivenins, and organotherapy, for in Africa the bushmen are accustomed to drink the poison of venomous snakes as a prophylactic against their bite,and the Hausas prevent hydrophobia by kill-

*Read at the International Medical Congress at Moscow.

ing the mad dog and making the man it has bitten eat its liver. The occurrence of death from wounds or poison is intelligible even to a savage, but when illness and death occur independently of these, men naturally attribute them to invisible powers. Thus the Dyaks of Borneo ascribe sickness to wounds from invisible spears wielded by invisible spirits, and during an epidemic of disease in the middle ages the cry often arose that the wells had been poisoned. These crude ideas often contain germs of truth, and when we look at Professor Metchnikoff's drawings of a Daphnia attacked by a Monospora we seem to recognize the invisible darts of the Dyaks; while during an epidemic of typhoid fever we have often to acknowledge that our wells have been poisoned by bacilli.

EVOLUTION OF PRIMITIVE SCIENCE.

It is impossible to trace the steps by which the crude ideas of savage peoples regarding physiology, pharmacology, and pathology have grown into definite sciences, or even to indicate the most important landmarks, though we naturally think of the names of Alkmaon, Galen, and Harvey in physiology; of Nicander, Magendie, and Bernard in pharmacology; and of Morgagni, Virchow, and Pasteur in pathology. During this century these three sciences have developed with almost incredible rapidity; a complete knowledge of them is enough to tax severely the most retentive memory; and it is almost impossible for any individual to keep up with the advance of all three of them. But just as the whole subject of astronomy became suddenly simplified by a change of standpoint at the very time when cycles and epicycles became most bewildering, so at the very time when these three sciences are becoming most complex and diverse they appear to be tending to unification and simplification. Pathology, for example, is now becoming to a great extent a branch of pharmacology, for while a few years ago its chief object was to discover, examine and classify the microbes which give rise to disease it is now striving rather to discover the nature and actions of the ferments and poisons which they form, and by which they are able to cause disease and death in the animals they attack. Pharmacological investigation, instead of being confined to the alkaloids and other poisons formed by higher plants, has now extended to those formed by microscopic plants or microbes, and thus comes to include a greater part of pathology. In the same way, though pharmacology is a branch of physiology, inasmuch as it deals with the phenomena of life as modified by drugs, yet physiology may to a certain extent be regarded as a branch of pharmacology, because some of the latest researches regarding the processes of life have been made by pharmacological methods, using the products of animal life instead of vegetable poisons. Amongst the pioneers in this line I may

mention my two masters, Kuhne and Ludwig, the former of whom by his chemical investigations has enabled us to differentiate the various products of albuminous decomposition, whilst the latter, with his pupils Schmidt-Muhlheim and Woodbridge, discovered the poisonous action of albumoses and peptones, and of the juices of various tissues when injected directly into the blood.

INTERESTING PROBLEMS IN DIGESTION.

Before the proteid constituents of our food can be absorbed they must be split up during digestion into albumoses and peptones; yet these researches show that the very substances which are necessary to repair waste and are indispensable for the continuace of life prove fatal when introduced into the body in a wrong way or in too great quantity. But the products of the digestion of albumen do not normally enter the circulation as albumoses and peptones. During absorption they undergo changes of a synthetic nature in the walls of the intestine, and probably to a certain extent also in the liver, so that they again form harmless substances, and their poisonous properties are destroyed before they enter the general blood stream. But how is it that the ferments which decompose albuminous food and form poisons from it in the intestines do not pass into the blood and kill the animal by digesting the tissues and forming poisons from them? Of course pepsin can not do so, as it only acts in an acid medium, but there is no such hindrance to the action of trypsin, and yet it does not destroy the tissues composing the body itself. In all probability the reason why digestive ferments do not digest the tissues is not that they are destroyed in the digestive canal nor that they are not absorbed, but that they are altered from active enzymes into inert zymogens which can be stored up without risk, and can again liberate active enzymes when these are required to digest a subsequent meal. In this respect they may be compared to the knives used by wandering people to cut up their meat, and which are not thrown away after each meal, but are simply put into sheaths which cover their edges and deprive them for a time of their cutting power.

LIFE A PROCESS OF FERMENTATION.

But it is not in the intestine only that enzymes are found; they are also poured into the blood by the pancreas and probably by the thyroid and other glands. As our acquaintance with the processes of cell life increases it seems more and more likely that the tissue change on which functional activity depends is effected by enzymes, and the truer do the speculations of Van Helmont appear—that life is a process of fermentation. There can be little doubt that if enzymes in a free state were to circulate through the body they would do much

harm, and indeed we may regard this as well-nigh proved in regard to the enzyme of tetanus. But their action is limited either by their conversion in zymogens or their localization to the cells or tissues where their action is required. This is more readily seen in plants than in animals, and one of the best examples of it is that in germinating wheat. In the ordinary state of the grain the diastatic ferment is kept apart from the starch by a small layer of cellulose, through which the diastase can not pass, but during germination another ferment appears which has the power of dissolving cellulose, and by breaking down this dividing membrane it allows the diastatic ferment to act upon the starch, and renders it available for the needs of the growing plant.

EXTRACTION OF ENZYMES.

Enzymes appear to differ among themselves nearly as much as albumen, albumoses, and peptones. Some are easily separated from the cells in which they exist, whilst others are so closely united to the protoplasm that their separate existence apart from it has been denied. The yeast plant, for example, yields an invert enzyme which can be extracted with comparative ease, but the enzyme which splits up sugar into alcohol and carbonic acid is so firmly attached to the protoplasm of the cell that it is only within the last few months that it has been isolated by Buchner by the application of enormous presture. It is probable that the enzymes contained in the cells of animal tissues differ in like manner, and that by the use of similiar methods we may obtain a number of enzymes with which we are at present unacquainted. But it is not merely the products formed in the digestive canal or in the organs of animals during life, or even the alkaloids that are formed by the higher plants, that act as poisons. The processes of life are much the same in the lowest microbes as in animals or in the higher plants, and these microbes, by forming ferments and poisons, give rise to disturbance of function or death in animals. When grown in suitable media outside the body they produce enzymes and poisons, albumoses and alkaloids, and many of them continue to do so after their introduction into the body.

POISON AND ANTIDOTE.

One of the most curious points, both in the chemistry of the higher plants and of microbes, is that they tend to form at the same time a poison and its antidote. In Calabar bean, for example we find there are two poisons—physostigmine and calabarine, the former tending to paralyze the spinal cord and the latter to stimulate it, so that each poison to a certain extent antagonizes the other. The same condition is found even more markedly in jaborandi, of which the two alkaloids, pilo-

carpine and jaborine, antagonize one another's action so that, although pilocarpine generally greatly predominates, it might be possible to get a specimen of the leaf *having no action at all*, although it contained a quantity of alkaloids. When injected into animals the toxins formed by microbes and the venins of serpents cause the production of antitoxins and antivenins, which neutralize their action apparently by chemical combination in somewhat the same way as an acid and alkali, each poisonous by itself, combine to form a comparatively inert salt: But the two components here, like an organic acid and a mineral base, are unequally affected by destructive agencies, and the antivenin may be destroyed, so that the venin again regains its activity. The conversion of zymogens into enzymes may be compared to the freeing of venins from their compounds, while the conversion of active venins into inert bodies by combination with antivenins suggests that a similar process may occur in the case of active enzymes, by which they may be converted into inactive zymogens.

Perhaps the hypothesis I mentioned eight years ago to my pupil and friend, Mr. Hankin, that the germicidal power of organisms is proportional to their power to produce enzymes, may not be altogether unfounded, and possibly we may discover also that immunity, natural or acquired, is nothing more than an extension to the cells of the tissues generally of a power which is constantly exercised during digestion by those of the intestine and liver. The problem is one which pertains to all three sciences and has a most important bearing on practical medicine.

THE SOURCE OF MEDICAL PROGRESS.

Practical medicine, except when empirical, depends for its advance on physiology, pharmacology, and pathology. A knowledge of the physiology of digestion has led to the satisfactory treatment of dyspepsia by the administration of digestive enzymes, and pharmacological research has enabled us to treat diseases of the circulation with a success previously undreamed of, by teaching us not only how to use aright old remedies, such as digitalis, but also how to apply new ones, such as strophanthus and amyl nitrite, and even to manufacture others, such as nitro-erythol, which possess the special actions we desire but which are lacking in the drugs we already have. Indeed, new remedies which shall alter tissue change, lower temperature, relieve pain, and procure sleep, are now being made in such numbers that it is hard to keep count of them. But among all the new gains of practical medicine none are so remarkable as those which we owe to pathology. Time would fail me to speak of the prevention and cure of zymotic diseases, but no less astonishing is the discovery that myxedema depends on inactivity or absence of the thyroid gland, and can

be cured by the administration of its extract, which seems to act as an enzyme on living tissues, so that the heavy, shapeless, features of the patient resume their natural expression, and the sluggish mental processes quicken.

An exhaustive study of enzymes and their products appears to be the most promising way of advancing our knowledge both of the nature and treatment of disease. Probably more is to be hoped for from an investigation into the nature and properties of those enzymes which are intimately associated with the protoplasm of the cells in the various tissues and organs than even of those which are poured into the blood by glands having an internal secretion, such as the thyroid. For all organs, even those which, like muscles and nerves, are not glandular, have an action on the blood comparable to that of the yeast plant, which modifies the fluid in which it lives by the substance which it removes from or adds to it. It is to a knowledge of the processes which occur in the protoplasm of the cells in the intestinal wall and liver, and of the enzymes by which these processes are in all probability carried out, that we must look for an explanation of the conversion of the poisonous albumoses formed during digestion into innocuous albumens, and of dangerous enzymes into harmless zymogens. Moreover it seems to me that it is by researches into the nature and action of the enzymes, not only of microbes, but in the various tissues of the body in higher animals, that we shall learn how the microbes, like the enzymes of the intestinal canal, produce poisonous albumoses and how the tissues, like the cells of the intestinal walls or liver, convert them into harmless or even protective substances. In this way we may hope to obtain an explanation of toxins and antitoxins, of pathogenesis and immunity, as well as the nature of diseases unconnected with the presence of microbes, such as diabetes. Twenty-three years ago I attempted to obtain a glycolytic enzyme from muscle, in order to enable diabetic patients to utilize the sugar in their blood. My attempt was unsuccessful, but we may still hope that by other methods we may obtain from animal organs various enzymes, the administration of which may prove as useful in other diseases as the thyroid glands in myxedema.

Practical medicine depends on physiology, pharmacology, and pathology, but all three are tending to become more and more subdivisions of the wider and all-embracing science of chemistry. It is to a chemist, Pasteur, that we owe the wonderful development of pathology within the last quarter of a century, and we may fairly regard his fellow-countryman, Lavoisier, as the founder of this science. Men from all countries, and especially from Germany, have aided its development; but it seems fitting that at this Congress, in acknowledging our obligations to this science, we should not omit to

mention that at its head now stands a Russian, Mendeleef, whose marvelous prescience enabled him to predict the existence of elements which were then unknown, and even to describe their properties more correctly than those who first verified his predictions by obtaining the substances themselves. When we consider that little more than a hundred years have elapsed since the time of Lavoisier, and contemplate the vast benefits which medicine and its allied sciences have derived from chemistry during this time, our hopes can not be otherwise than great for centuries to come.—*Indian Lancet.*

DEGENERATE FAMILIES.

There is a paper on "The Causes of Poverty," by the late Francis A. Walker, in the December *Century.* Gen. Walker says:

"The true predominant causes of pauperism, as of crime, have been strikingly and painfully brought out in tracing the history of a few families. Three cases will suffice. The reader remembers the investigation of the Jukes family in New York State. Mr. Dugdale estimated that the members of this family, descendants of one worthless woman or intermarried with her descendants, have in seventy-five years cost the State, as criminals and paupers, a million and a quarter of dollars. The history of a Kentucky family founded in 1790 has been traced to include the character and conduct of a host of its members by descent or by sexual alliance legitimate or illegitimate. Among these have been 121 prostitutes. Thieving and beggary have made up the lives of most of the remainder. Those who try to do something better for themselves prove unable to perform hard labor or to endure severe weather. They break down early and go easily to the poorhouse or the hospital. From Berlin we have the history of another criminal and pauper family, the descendants of two sisters who lived in the last century. Their enumerated posterity numbers 834. Of these the history of 709 has been traced with tolerable accuracy. They embrace 106 illegitimate children, 164 prostitutes, 17 pimps, 142 beggars, 64 inmates of poorhouses, and 76 who have been guilty of serious crimes. Still other instructive cases are given, in one of which nearly all the inmates of a county poorhouse have been found to be related in blood.—*The Sanitarian.*

AN APPEAL TO EVERY REGISTERED PHYSICIAN AND LICENSED MIDWIFE IN THE UNITED STATES FOR INFORMATION CONCERNING CRIMINAL ABORTION.

DEAR DOCTOR: I most earnestly appeal professionally to each of you, regardless of your school of practice, your prominence in the medical profession, or your location, to answer the questions given below. In replying please designate each question by its number. Answers can be made in numerals, and if you do not elect to respond by letter a postal card will do as well. The face of such a card will present only an aggregation of meaningless figures to all who handle it except ourselves.

However, I will highly appreciate whatever you may impart in relation to criminal abortion otherwise than may be contained in your answers to my questions. I trust your visiting list, your cash and account books, and other data in your possession, will enable you to give *definite* or *approximate* answers without consuming too much of your time. If the 115,000 to 120,000 physicians in the United States will kindly give the information I ask, I will return to them through the medical press, some time during 1898, a summary of the results of my investigation.

I desire to assure you that every line given me on the subject of my inquiries will be held strictly private, if you request it, and should you not request its privacy, I will give it good treatment. If for any reason you wish to withhold your full name your initials will suffice. Remember my inquiries cover the year 1897, and where you can not give a *definite* answer an *approximate* answer is desirable.

QUESTIONS.

1. Give total number of abortions from all causes that occurred in your practice during 1897.*

2. In how many of these abortions were the elements of criminality, to your mind, apparent?

3. In how many of these abortions, except those classed in question 2, were the elements of criminality, to your mind, probable?

4. How many of the abortions named in questions 2 and 3 were followed by puerperal septicæmia or other diseases?

*NOTE.--Question 1 should include abortions which you know occurred among your lady patrons without the attention of a reputable physician. Any abortion that resulted from an obstinate disregard on the part of the woman, of a physician's advice, or from the willful commission of any act which her observation, experience and other knowledge gave her reason to believe might induce immediately or even remotely the expulsion of the uterine contents, was criminal. (Any act, however simple, occurring in the daily avocation of a pregnant woman, if impelled by an intent, or even a desire or wish to get rid of pregnancy is criminal whether she aborts or not.) I use the word "abortion" here to mean the expulsion of the products of conception at any time during gestation to the end of the seventh month if the abortion was unavoidable, and to full term if criminal.

5. How many deaths resulted from abortions named in questions 2 and 3?
6. How many still-born in your practice?
7. How many infanticides?
8. How many viable children born in your practice?
9. How many cases of puerperal mania resulted from the abortions classed in questions 2 and 3?

All midwives who are licensed are solicited and urged to answer the above questions so far as their knowledge enables them. Doctor, permit me again to beg that you answer my inquiries either *definitely* or *approximately*, and if for any reason you can not fully answer all, do your best on questions two, three, five and nine. Medical journals throughout the United States are requested to favor the undersigned with an insertion of these questions in their January or February (1898) issues.

C. D. ARNOLD, M. D.

El Reno, Okla.

THE DISINFECTION OF BOOKS.

At a recent discussion of this subject Dr. John S. Billings, the director of the New York Public Library, said, in part:

"At an investigation made by the State Board in Iowa three years ago it was found that six cases of scarlet fever were undoubtedly communicated through circulating library books. Other diseases may be communicated in the same way. There is not much danger of this from the edges of cards, although they are foul and filthy, and undoubtedly filled with bacteria, more especially with those of skin diseases. In order to prevent any possibility of the diseases through books it is necessary to destroy the bacteria.

"We cannot use the method of applying 210 degrees Fahrenheit of dry heat. That would curl the leaves and injure the bindings. Much less can we apply 212 degrees Fahrenheit of wet heat. We cannot apply a solution of corrosive sublimate or zinc chloride. The fumes of burning sulphur are both inadequate and undesirable.

"Two years ago, when in Philadelphia, I suggested to one of the fellows in the laboratory that it would be desirable to seek a new method. Formaline was known to be a destroyer of bacteria, and he set to work on that. This can be purchased in a drug-store, or may be made by burning methyl alcohol. A saucer of formaline, a book which had been infected with the bacteria of diphtheria, another with scarlet fever, and another with erysipelas were placed under a bell jar. The experiment showed that one cubic centimetre of formaline to 300 cubic centimetres of space would thoroughly disinfect any book in fifteen minutes."

Society Reports.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

Regular meeting held December 21, 1897. Dr. J. N. Upshur (President) in the chair. Dr. Mark W. Peyser, Secretary and Reporter.

Election of officers for the year 1898, resulted as follows: Dr. M. D. Hoge, Jr., President; Dr. E. C. Levy, First Vice-President; Dr. A. L. Wellford, Second Vice-President; Dr. A. C. Palmer, Third Vice-President; Dr. Mark W. Peyser, Secretary and Reporter; Dr. W. H. Parker, Assistant Secretary; Dr. R. B. Teusler, Treasurer; Dr. R. W. Nichols, Librarian.

Reports of Cases.

Vomiting of Blood by one-day-old Infant.—The President reported a case of the like of which, he said, he had never seen before. On Sunday afternoon, 19th, he delivered a primapara, after an easy labor, of a girl baby weighing six pounds. It nursed heartily and there was no indication of trouble for twenty-four hours, when it threw up blood and colostrum. The history of the parents was unexceptional. Within a few hours after vomiting, there were frequent operations containing large amounts of meconium and blood. The skin and mucous membranes were pallid, the fontanelles depressed, and sutures prominent. He was at a loss to account for the hæmorrhage; but his idea was that there existed engorgement of the liver with congestion of the portal system and hyperæmia of the stomach and bowels. Thus, he prescribed calomel, two grains, and chalk, one grain, divided into ten powders, one powder given every hour. This afternoon (21st), the child was getting under the influence of the calomel, and as a result, there was less blood in the last three operations, and the child was progressing very satisfactorily. After mentioning the case to several medical friends who had never seen or heard of such a case, he consulted the *American Text-Book on Children*, and found reports of several cases with suggestion of just such treatment as he had given.

Fulminant Appendicitis.—Dr. George Ross said that in the past week he had had the only case of fulminating appendicitis he had ever seen. The patient was a man, age twenty-one, of feeble physique, night operator of the long-distance telephone. He had had bronchitis and recovered. On the night before his death, he seemed perfectly well. When seen at three P. M., there was a temperature of 102.5°; pulse, 130; and marked

tenderness. At night, temperature was 101.5°, pain diminished, but general condition unfavorable. A consultation was held, with the result that the patient was taken to Virginia Hospital, but died before he could be placed on the table.

Appendicitis—No Pathognomonic Symptom Usual.—Dr. Ed. McGuire said he had seen a large number of cases of appendicitis, and had reached the conclusion that no single symptom could be relied upon to determine an operation. In the case of Dr. Neblett, there was suppurative peritonitis with a necrotic appendix. He had been improving, and on the evening of his death, was thought to be out of danger; but he was seized with convulsions, and in three hours was dead. The urine was loaded with albumen.

Last Monday morning, he saw a young man who had had a cramp the night before while on the train. There was a regular pulse and no fever. On the right side was a little tenderness. The bowels were free, but he had vomited. Thinking it was cholera morbus, calomel was prescribed. In the afternoon, upon making a second visit, was found increased tenderness, with a temperature of 100.8°. Appendicitis was diagnosed, and the patient taken to Virginia Hospital and operated upon the next day at one o'clock. A necrotic appendix was found. Recovery ensued.

Dr. McGuire said, in conclusion, that he had again and again seen cases where the symptoms were slight, but the course of the disease bad. He thought if all cases could be operated upon within twelve hours, mortality would be reduced one per cent.

Occlusion of Opening Into Cæcum Possible Cause of Appendicular Abscess of Fulminant Appendicitis.—Dr. W. T. Oppenhimer observed that in the fulminating form the appendix was always occluded next to the cæcum, distention resulting from accumulation of gas or pus. In a number of cases, the appendix could be cut off and no opening seen; therefore, he believed that in these the organ could be taken away close to the cæcum, no escape of pus resulting because of the agglutination. It was possible that a ligature was not necessary in these instances, and not applying one would prevent secondary hæmorrhage. He had observed cases without fecal fistula, in which the appendix had sloughed off and was floating in pus. Never having seen the point mentioned in any literature, he was of the opinion that it and the question of ligature should be investigated.

Dr. Hugh M. Taylor thought appendicitis capable of furnishing a greater number of surgical surprises than any disease with which he was familiar; and while it had claimed the lion's share of professional thought for the past ten years, we were only upon the threshold of knowledge as regards many

of its most important phases. Its etiology was an open question; a terminal circulatory supply, a short mesentery, a structure of feeble resistance, an estuary in the fecal current often blocked, and an ever-present micro-organism were credited as etiological factors; but we must ascertain more of its causation before we could hope to do anything in the way of preventing it. Ideal surgery was, of course, preventive surgery, and it was to be hoped that future evolution of the subject might attain such an end. Individual and collective professional opinion as to appendicits—its etiology, symptoms and treatment—presented a succession of acrobatic changes. He thought he was correct in claiming that many more conversatives were becoming radical in their views as to the importance of early operative interference, and thorough work whenever the condition of the patient warranted. His experience fully sustained the conclusion that an early resort to operation found the patient sufficiently strong to endure complete work—i. e., strong enough to bear the prolonged anæsthesia, removal of the appendix and pus cavity, unmatting of the bowels, resection of infected omentum, etc. He would impress the idea that an early operation was conservative in that it sought to prevent pus collections and adhesions of the appendix, bowel and omentum, and the serious complication of septic, purulent or fibrino-plastic peritonitis. He contended that at some time in the history of every case of appendicitis, it was entirely a local phlegmon, and this was the elective period for operative interference.

Some of his friends, medical John Jaspers, rarely saw cases of appendicitis, and never met with cases calling for operation. When a practitioner of experience told him he never had torn perinei, he felt like telling him "Your eyesight is defective," or "You do not lift up the sheet to look." So when a man told him he never met with cases of appendicitis, he was tempted to urge him to study its symptoms, and was almost willing to promise him acquaintance with a surprising number of cases.

Typical appendicitis should be as easy to diagnose as typical pneumonia, typical typhoid fever, etc; but, unfortunately, we met with a good many cases which were atypical, and in this class, the differential diagnosis was not always easy. Three conditions in the right half of the abdomen and pelvis notably, presented symptoms simulating some one of the clinical types of appendicitis. He alluded to gall-tract and tubo-ovarian inflammations and displaced right kidney with renal or Dietle's crisis. The diagnosis was, of course, easier in men, inasmuch as cholelithiasis and its consequences—cholangitis, cholecystitis, empyema of the gall-bladder and gall-tract colic were so much more frequent in women. Displaced kidney and its effects were likewise more common in women, and usually

occurred on the right side. Inflammation and suppuration from tubo-ovarian disease, and that incident to appendicitis, might present symptoms in common, but, usually, the differentiation could be made. The intimate lymphatic and vascular connection between the right broad ligament and the mesoappendix should be borne in mind, as it explained the frequent co-existence of appendicitis and right tubal inflammation. Conditions less frequently and less positively obscuring diagnosis of appendicitis were typhoid fever, ileus, intestinal indigestion, tubal gestation, gastric ulcer, hysteria, etc. He had at the present time, two cases of phantom appendicitis. In both, he was satisfied that the morbid condition existed only in the nervous system. Both patients were able to simulate many of the symptoms of appendicitis, as localized pain, muscular rigidity, etc. He was obliged to anæsthetize one in order to satisfy himself as to diagnosis, while the other spent sleepless nights and anxious days, and upon one occasion implored him to operate, so that he need not endure another such night of agony.

Dr. Ed. McGuire said if Dr. Oppenhimer's suggestions were followed, there would be liability to secondary infection. He had seen fecal matter in more than one instance in such cases.

Editorial.

SMALLPOX VS. CHICKEN-POX.

"Facts are stubborn things," or rendered otherwise "where ignorance is bliss it is folly to be wise," are the two horns of a dilemma.

It will be remembered that some pertinent interrogatories appeared not long since in one of our daily papers as follows:

"*To Dr. J. F. Alexander:*

"Is the eruption of chicken-pox of a vesicular or pustular nature?

"What are the points of difference in the cutaneous manifestations of chicken-pox and smallpox?

"Will the occurrence of chicken-pox prevent the development of vaccine virus either during the eruption or subsequently?

"Is the period of incubation of the smallpox modified by the early introduction of vaccine virus, so as to arrest the development of pustules?

"Should those who have been exposed to smallpox expect to prevent it by prompt vaccination?

"An early reply to the above will be appreciated by many readers. "J. McF. Gaston, M. D."

It would appear that these questions must have escaped the attention of the party to whom they were addressed were it not that I sent them under cover to him at his office. Another member of the medical profession might have been included with him, had not my consideration for his subordinate position induced me to call upon his chief for an explanation of their joint blunder in heralding their failure to recognize a case of smallpox at a stage when the merest tyro in diagnosis should not have made their mistake in classifying it as chicken-pox. If the questions had been answered correctly, valuable information would have been imparted, by which to direct the investigation of the distinctive symptoms of smallpox in their difference from chicken-pox. But now as this disease has disappeared from our city and its suburban population, I leave each medical man to frame his own answer to the questions. It would have facilitated an understanding of those

interrogatories to have added one more and to have asked if chicken-pox ever became so virulent as to communicate confluent smallpox to those who were exposed to it, as occurred in connection with a case so diagnosticated by these two members of the profession. It is not the only time that such errors have resulted in the management of doubtful cases, and the consequences in this instance would have proved more serious had not my timely injunction been carried out by the prompt vaccination of all connected with the school where the case occurred. Some days after the development of the disease in others who had been exposed to the contagion of this patient, I prepared the statement which follows to lay before the public, but circumstances have delayed its appearance until it became more appropriate for the consideration of the medical profession than for the people generally:

"Believing that no private interests can now be compromised and that the welfare of the public will be promoted by a publication of the facts in regard to the case at College Park which was pronounced by me to be smallpox and subsequently declared to be chicken-pox by Drs. J. P. Kennedy and J. F. Alexander, I think it proper to give a correct statement of what has occurred up to date in regard to this case.

"On December 4th, I was called upon by Dr. J. J. Foster to accompany him to College Park to see a young man in the Military School, whose case was diagnosticated by me to be smallpox in the pustular stage. I advised that a test vaccination be made in the case which was done by Dr. Foster on two occasions without any manifestations of the characteristic effects of the vaccine virus, thus verifying that the disease was not chicken-pox, but a genuine case of smallpox.

"In the meantime, Dr. J. P. Kennedy visited the patient, and published that the disease was chicken-pox, and subsequently he and Dr. J. F. Alexander, who had also inspected the patient, issued a card stating that it was the chicken-pox and should not cause alarm.

"I am credibly informed that ten cases have developed since, having the recognized symptoms of varioloid or of smallpox, which can be traced to the patient examined by me on December 4th and diagnosticated then as smallpox.

"My recommendation was to vaccinate at once all those connected with the school, and I have learned that vaccination

has been generally carried out with all the residents of the place; so that it is reasonable to infer that only those exposed to contact with the disease before undergoing vaccination will suffer from it. The people may congratulate themselves upon following the advice based upon my diagnosis."

On Dec. 24th, I again visited the building at College Park in which the case had been seen by me on the 4th of December, and found that Dr. Foster had been confined to the building with patients under his care in various grades of smallpox and varioloid, dependent upon the period at which vaccination was resorted to. In one case, vaccination being delayed, confluent smallpox was the result; in four cases there was discrete smallpox; and in six cases varioloid made its appearance after the vaccination ran its regular course in six points of insertion on the night I pronounced the case as smallpox. There were two other boys who left for their homes in other States who have taken smallpox due to their previous exposure to this case, thus making in all twelve cases propagated by the first case.

It may be stated that no case of smallpox or of varioloid has occurred among the population of College Park, outside of the building where this case occurred, and hence there was no other focus from which the disease could be propagated. The development of smallpox in twelve different subjects who had been exposed to this case, proves conclusively that my diagnosis of smallpox was correct.

J. McFADDEN GASTON, M. D.

THE PHYSICAL DEGENERACY OF THE NEGRO.

The physical degeneracy of the negro is the subject of an editorial in a recent number of the *New York Medical Record.*

It contains a quotation from Dr. R. H. Johnson, a colored physician of Savannah, to the effect that the present generation of negroes is distinctly inferior to the preceding and that the cause of the degeneracy lies in carelessness, want of forethought and dissipation characteristic of the race.

As a slave, the negro was valuable property and was carefully looked after; now, being free and equal with the white man, he has shown his inability to stand alone by rapidly

degenerating at all points. Slavery to the negro was therefore not an unalloyed curse.

Carelessness, lack of forethought and dissipation are essential characteristics of the blacks and have always been, and are not to be held as immediately precipitating causes of their physical decay.

Venereal diseases and tuberculosis have worked the negro's partial undoing and are still at work.

Negroes mature early and are not virtuous. They early indulge in unbridled sexuality with the inevitable result of sooner or later acquiring gonorrhœa or syphilis. Gonorrhœa sterilizes the woman, syphilis devitalizes the offspring and tuberculosis comes in to close the gloomy scene.

A gentleman of this town, who was for more than twelve years city physician in a ward where negroes were numerous, deliberately asserts that seventy-five per cent. of them are syphilitic, tuberculous, or both.

The greater the admixture of white blood, the smaller the negro's resistance to disease.

The "negro problem" is being slowly solved by busy little bacteria, working a slow but sure decay. Unless the negro becomes the ward of this great and good government, or is transported to some primitive country beyond the pale of civilization and its vices, and allowed to recuperate, his doom is sure and certain. The negro problem will be solved by the forces of nature and not by leather-lunged fanatics who shout themselves hoarse over effete theories of social equality.

The recent conviction at Paris of Dr. Laporte for mal-practice in causing death from peritonitis following perforation of the bladder in a maladroit attempt at craniotomy, has set the pace for a similar suit, which, however, proved to be something of a boomerang. Witness the following from the *Progre's Medicale*:

"The court of correction at Montdidier has tried recently a curious suit. In last November Dr. Duquesnel, counselor-general at Roye, received the following letter from a man named Fenillette, formerly a harness-maker of Roye:

"'Sir—In 1887, you confined my wife and in performing craniotomy, by your ignorance and employment of improper in-

struments, you provoked a peritonitis which caused her death.

"'If you had performed Cæsarian section, you would have saved the child, but as you were in collusion with my mother-in-law to destroy my wife and my child, you preferred craniotomy. In causing the death of my wife and child you have done me an injury for which I ask immediate reparation, and if you do not send me 10,000 francs within forty-eight hours, I will make you answer in a court of law for what you have done. 'FEUILLETTE.'

"The procureur of the republic of Montdidier to whom Dr. Duquesnel handed the letter, instituted an investigation which resulted in the prosecution of Feuillette for attempted blackmail. The trial came to court this week at Amiens. Dr. Duquesnel testified that eight years ago he had been called to attend Feuillette's wife, aged 28; her labor was difficult and failing to effect delivery with forceps, he had recourse to craniotomy. The woman died the next day. The doctor added that he had done nothing for which he could reproach himself. The plaintiff Auguste Feuillette, aged 43, formerly harness-maker of Roye, now the proprietor of a saloon at Amiens, stated to the court, that on account of the trial of Dr. Laporte which resulted in his being sentenced to three months in prison, he believed he had a right to demand of Dr. Duquesnel 10,000 francs damages.

"He maintained to the end that the doctor had conspired with his mother-in-law to cause the death of both mother and child, by which means the mother-in-law would gain possession of the wife's dowry.

"The substitute of the procureur, M. Ducatez, applied to the case Art. 400 of the penal code, and Feuillette was condemned to fifteen days imprisonment."

Book Reviews.

HAND-BOOK OF THE MATERIA MEDICA, PHARMACY, AND THERAPEUTICS, including the Physiological Action of Drugs, the Special Therapeutics of Diseases, Official and Practical Pharmacy, and Minute Directions for Prescription Writing. By Sam'l O. Potter, A. M., M. D., M. R. C. P. Lond. Sixth edition, fully revised, and greatly enlarged. 8vo., pp. 900. Philadelphia: P. Blakiston, Son & Co. 1897. Price, $4.50.

The present edition bears very little resemblance to the first edition of ten years ago. So much has been added in the way of new material and careful revision of the old, that the edition of 1897 is practically a new work.

The information on the subject of drugs and their therapeutic application, when and how to prescribe them, is as full, complete and accessible as could be desired. The work is entirely up to date, containing the newest additions to the materia medica and will prove a valuable possession to any one who contemplates purchasing a new work on this branch.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By John V. Shoemaker, M. D., LL. D. Third edition, revised and enlarged, with chromogravure plates, and other illustrations. 8vo., pp. 804. New York: D. Appleton & Co. 1897.

There is probably no work in the entire realm of dermatology which is as popular with the general practitioner as Shoemaker's. The clear clinical descriptions, often illustrated by plates, and the full and detailed therapeutic suggestions, with wealth of practical formulæ, make this work particularly to be recommended to any one who wishes to add to his library a representative work on dermatology. The present edition is an amplification of the former; some new matter and several plates have been added.

Notes.

A new medical journal, published in Philadelphia under the editorship of Dr. Geo. M. Gould, made its appearance the first of the year.

Mr. Jonathan Hutchinson, F.R.S., has intimated his willingness to found an educational museum in his native town of Selby, Yorkshire.

Mr. Frederick Treves has resigned the Lectureship on Surgery at the London Hospital, and has been succeeded by Mr. Mansell Moullin.

Governor Adams, of Colorado, has signed the bill prohibiting the sale of cocaine without a written prescription of a licensed physician or dentist.

A Louisville physician at present practising in the Klondike gold region is reported to be making a fortune by selling capsules of quinine at three dollars apiece.

The ninth International Congress of Hygiene and Demography, under the patronage of His Majesty the King Alphonso XIII., and the Queen Regent, will convene at Madrid, in April.

Among the institutions in which Atlanta takes pride, is the Holmes' Sanatorium, which has done and is doing splendid work for the afflicted, and adding to the name and character of the city abroad. The inspiration of this remark is a personal knowledge of its work and excellence.—*Atlanta Presbyterian.*

The McIntosh Battery and Optical Company of Chicago, have issued a complete catalogue of their goods combined with an electro-therapeutic. Every one who has not a work on this subject would do well to possess himself of this catalogue, as it contains about all that he can need of practical information on the subject.

At the recent International Congress on Leprosy held in Berlin, Professor Virchow was elected president. Dr. Hansen, of Norway, in his address emphasized the necessity of isolating

lepers, a measure which he said was of as much interest to the patients as to the community at large. In Dr. Hansen's opinion the efforts of Unna, Carasquilla and Danielson to cure leprosy by means of drugs and the serum treatment have been quite ineffectual, claiming that the disease decreases only under the influence of strict isolation and increases again when isolation ceases to be enforced. He also claimed that the hypothesis that leprosy might be due to hereditary influence was erroneous.—*Medical Age.*

A LONG RANGE "TOUCH."

"Mr. Campbell, caterer for one of the 'messes' at the University of Virginia has recently been robbed of $200 and a medical student *of New Jersey* has been arrested as being the thief."—*Ex.*

FIRST AID TO THE INJURED.

There was a young lady named Cheedle,
Who, at church, sat down on a needle;
Though deeply imbedded
It was luckily threaded
And was promptly removed by the beadle.

A NEW SURGICAL ACHIEVEMENT.

From Switzerland comes the report that Dr. Carl Schlatter, of Zurich, has made a complete removal of the stomach. This operation has excited a good deal of wonder in the lay mind, but with the triumphs of gastro-intestinal anastomosis already before us, it is certainly no new idea that the stomach is not a vital or even a necessary organ. Our knowledge of intestinal digestion should certainly be sufficient to make the stomach a physiological superfluity from the standpoint of nutrition. It will be interesting to note, when the time arrives, to what extent Nature will adapt the end of the intestinal tube to the form and function of the removed organ—to observe, in fact, how far she will condone surgical audacity.—*Medical Age.*

SURGICAL HINTS.

In the treatment of abscess, free drainage is far more important than the use of chemical antiseptics.

In ligating vessels the fine ligature is best so long as it is strong, for the knot is less liable to slip.

Cancer of the breast occurring during pregnancy or lactation is particularly malignant, and is of very rapid growth.

Do not drain a healing cavity for too long a time. Your drain may be acting as a seton, actually keeping up the suppuration.

A tumor which having existed for a long time suddenly begins to grow, should be regarded with the gravest suspicion. It is probably malignant.

In draining spaces whose walls are flaccid and tend to fall together, gause does very well. When there is a true cavity, however, a tube will usually be more efficient.

In diagnosing abdominal tumors it is always best to clear the patient's bowels thoroughly, and then palpate in full surgical auæsthesia before venturing a positive opinion.

When chronic intestinal obstruction is caused by carcinoma, wherever located, there is, practically, always an intermittent pain, of a paroxysmal nature, situated in the reigon of the umbilicus.

Dermoid cysts at the outer angle of the brow are often taken for lipomata or for wens. These dermoid cysts are not easy to remove, for they are very firmly attached to the bone, often, too, by a wide base.

If you are about to examine a septic case or one where you suspect syphilis, wash your hands in vinegar or dilute acetic acid, and you will soon discover by the smarting any little scratches or abrasions in your skin which might become the starting points of infection.

When you wish to pack a large cavity with gause, a good way is to fit a single layer or sheet of the material all round against the walls of the space, allowing the edge of the gause to remain outside. You then have a gause bag lining the cavity. Into this bag you may pack as much gause as may be necessary for pressure, or for thorough absorption of the discharges. When the time comes for removing the packings you will find that by first removing the inner filling of the gause bag, and last of all the bag itself, there will be comparatively little pain, little hemorrhage, and little derangement of the tissues.—*International Journal of Surgery.*

BUSINESS DEPARTMENT.

Address all letters relative to business matters and make all money orders payable to B. M. Zettler.

If the SOUTHERN MEDICAL RECORD is sent to any one who does not wish it, or beyond the time he intends to pay for it, the editor must be informed directly to stop it. It will not be sent knowingly to any one who does not wish it, but if notice is not given to discontinue payment will be required for the time it is sent.

ATTENTION.—All communications and all matters pertaining to this department must reach us by the 20th of the month to insure insertion in the following month's issue.

Special Notes.

SANDERS SON'S EUCALYPTON EXTRACT (EUCALYTOL).—Whenever mention is made of Oil of Eucalyptus, we beg you to bear in mind that such reference applies to our preparation, styled for distinction, Eucalypti Extract (Eucalyptol). To avoid disappointment, we would suggest to specify when prescribing, our manufacture. Samples gratis through Dr. Sanders, Dillon, Iowa. MEYER BROS. DRUG CO.
St. Louis, Mo.

I have given your BROMIDIA with success as a remedy for insomnia, especially where produced by excessive study or mental work.
DR. LUIGI SALUCCI, Physician to the Holy Apostolic Palaces,
September 1, 1897. The Vatican, Rome.

MELLIN'S FOOD is of real value used in combination with milk. It may be first dissolved in water and the solution used to dilute the milk or the powder may be added directly to the milk. In either way the milk is rendered more digestible.—*Domestic Hygiene of the Child*, PROF. UFFELMANN, University of Rostock, Germany.

MELLIN'S FOOD is of real value used in combination with milk. It may be first dissolved in water and the solution used to dilute the milk or the powder may be added directly to the milk. In either way the milk is rendered more digestible.—From "*Domestic Hygiene of the Child*," PROFESSOR UFFELMANN, University of Rostock, Germany.

JNO. C. LEVIS, M. D., West Bridgewater, Pa., says: I have used CELERINA in my own case for insomnia. Among all the hypnotic preparations and nerve tonics, it stands justly pre-eminent. Several persons are now using it and report that no preparation has given such permanent and prompt relief. In a general practice of more than half a century this is perhaps the first public testimony I have offered. CELERINA is the very best nerve tonic now offered to the profession, and can not be too highly recommended. To those wanting a nerve stimulant it will be just the remedy.

OPHTHALMIA NEONATORUM.—The law of many States require the obstetrician to use prophylactic measures to save the sight of newly born infants. A safe, harmless and positive procedure is the thorough cleansing of the conjunctiva with a 25 per cent. solution of "Palpebrine" and the application of a few drops full strength into the eyes shortly after birth. Many physicians make it a routine rule to use "Palpebrine" even if there is no evidence of liability to infection. "Palpebrine" is an Antiseptic, Germicide and slightly astringent solution. The Dios Chemical Co., St. Louis, will mail sample and formula on application.

IN SMALLPOX.—UNGUENTINE has proven to be extremely valuable in the treatment of smallpox as it immediately arrests the excessive burning and itching of the papular stage, and soothes the irritation in the vesicular stage, and moreover, from personal experience of Dr. B. F. Neal, of Ellenville, Ulster county, N. Y., who gave it a very thorough trial during the epidemic of smallpox which raged in that town and vicinity during the winters of 1895 and 1896, he found that UNGUENTINE in every case prevented the pitting, and the soothing effects greatly modified the patients' desire of scratching themselves, and the results in all cases were extremely satisfactory.

CONFIDENCE WELL PLACED.—You can be assured that I will prescribe the IMPERIAL GRANUM, whenever there is an indication for a prepared food, because I had sufficient confidence in it to give it to my own child, and it agreed with him perfectly, and he has increased in size and weight to an astonishing degree. ——— M. D.

To John Carle & Sons, New York City.

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December 6, 1897.

It is our custom from time to time to have analyses made by different prominent chemists of our COD LIVER OIL EMULSION to show maintainance of a standard 50 per cent. emulsion, and thereby refute the representations by unfriendly competitors.

We ask your attention to the eighth analysis of this series, given below:

COLLEGE OF PHARMACY OF CITY OF NEW YORK, Nov. 15th, 1897.

This is to certify that I have examined a trade bottle of PHILLIPS' EMULSION OF COD LIVER OIL (with Wheat Phosphates) purchased from druggist's regular stock, and find the same to contain fully 50.2 per cent. by volume of Cod Liver Oil, also phosphates as claimed upon the label. The emulsion was as nearly perfect as is possible to make; when subjected to microscopical examination the oil globules were found to be as minutely subdivided as the fat globules of cow's milk. V. COBLENTZ, Ph. D., F. C. S., etc.,

Prof. of Chemistry New York College of Pharmacy.

To the Chas. H. Phillips Chemical Co., 77 Pine Street, New York.

THE SUPERIORITY OF SUGAR-COATED PILLS—"WARNER"—is demonstrated by a wealth of evidence. There is accumulated evidence of perfect results obtained by the Medical profession which has used them for over forty years. There is evidence in the award granted by the Columbian Exposition, 1893, upon the following grounds: "The pills are of uniform size, the coating is perfect and protects the pills indefinitely, samples twenty-seven years old being shown readily soluble in hot or cold water." A soft pill mass protected indefinitely from atmospheric conditions is certainly the perfection of pill making. There is evidence to be found every day by suspending a Warner pill on a mosquito netting in water from 98 to 100 degrees, and watching it dissolve. This test is conclusive as the conditions most nearly approach the natural conditions present in pill medication. It will show the superior solubility of the Warner product over pills made by any other process. It will guide the pharmacist in his specifications.—*Monthly Retrospect of Medicine.*

CONTINUED GOOD RESULTS.—The January, 1894, number of *The Quarterly Journal of Inebriety* published under the auspices of the American Association for the study and cure of Inebriates, Hartford, Conn, U. S. A., says through its able editor, T. D. Crothers, A. M, M. D.—"ANTIKAMNIA is one of the best remedies in influenza, and in many instances is very valuable as a mild narcotic in neuralgias from alcohol and opium excesses. We have used it with best results." In a letter of more recent date to the ANTIKAMNIA Chemical Company, Dr. Crothers writes: "ANTIKAMNIA continues to improve in value and usefulness, and we are using it freely." *The Edinburg Medical Journal*—Scotland—says, regarding ANTIKAMNIA: "In doses of three to ten grains, it appears to act as a speedy and effective antipyretic and analgesic." *The Medical Annual*, London, England, says: "Our attention was first called to this analgesic by an American physician whom we saw in consultation regarding one of his patients who suffered from locomotor ataxia. He told us that nothing had relieved the lightning pains so well as ANTIKAMNIA, which at that time was practically unknown in England. We have since used it repeatedly for the purpose of removing pain, with most satisfactory results. The average dose is only five grains, which may be repeated without fear of unpleasant symptoms."

IMPERIAL GRANUM ONLY WAS USED AS FOOD.—I am not writing you for any selfish motive, but feel that your food has saved my baby's life, and I am grateful and wish you to know it. I also wish to tell you that the IMPERIAL GRANUM does not seem to be known to physicians here as it should be. It was by mere accident that I happened to use it. Of course I had read your advertisements and testimonials in the Medical Journals, but there is so much of everything published in that way that physicians, unless their attention is particularly called to it, will sometimes overlook a valuable thing.

I talked with my druggist about it, and he said the IMPERIAL GRANUM was so good that it was queer every physician did not know it! We tried all of the several extensively secularly advertised foods with our little boy, but he could not use any of them. He always had trouble with his stomach and unfortunately I did not know of your food. I am now sure that it would

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For TWENTY-SEVEN YEARS this great benefaction has been employed by the most eminent men in the profession with gratifying results, and many thousands have so testified; and we refer with great pride to any of the most eminent medical men in this country.

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have been just the thing. Our little girl (eleven months old) began in the same way. We again tried nearly everything, but I do not think she would be alive to-day, had I not decided to procure and try the IMPERIAL GRANUM! *From the very first she began to gain flesh and has never had any further trouble with her stomach or bowels!* One can readily see why it is just the thing for typhoid fever patients. I can not say too much in its praise. Truly yours,

November 11, 1897. ———M. D.

To the Imperial Granum Co.

PTHISIS: WINTER COUGHS.—The treatment of Pthisis, or Pulmonary Tuberculosis, is ever of interest to the practioner of medicine; at this time of the year, especially so. Like the poor, "it is always with us." So many specifics for this affection have from time to time been heralded to both the profession and the public, that it is doubtless true, that thousands of human lives have been sacrificed while demonstrating their worthlessness. It has time and again been proved that the best results in this disease can be attained by the use of what I may term "Standard" remedies, and not in the waste of time required in experimenting with serums, and other impositions on the medical fraternity. Prominent among the standard remedies referred to, stands one that may with truth be called "nature's own remedy," inasmuch as it is obtained from the very bowels of mother earth -PETROLEUM. The Angier Chemical Company, of Boston, have placed this remedy in our path in palatable form, combining with it the well known Hypophosphites. This EMULSION supersedes cod-liver oil in more ways than one, not the least of which is that it is palatable; consequently does not disorder digestion or produce nausea. This in many cases is of the greatest importance. In regard to its therapeutics it may be said that it is antiseptic, antispasmodic, stimulant, diaphoretic, nutrient and expectorant. By its use the cough is at once ameliorated, the perspiration is diminished, the patient is strengthened, thereby enabling him to expectorate the loosened mucus with greater ease; fetid odors are made less so, and frequently the consumptive steadily improves and regains health. In the first stages of this disease it is certainly curative, and can be verified by any practioner giving it a faithful trial. In the commoner coughs, often spoken of as winter coughs, even when not of tubercular origin—and also in bronchitis, ANGIER'S PETROLEUM EMULSION is invaluable. Here it exerts the same action on a cough, expectoration and mal-nutrition, as in the former conditions and other med cation is rarely required. In the vague and ill-defined chest pains of those recovering from an attack of pneumonia, pleurisy, or grippe, this preparation is specially indicated. The improvement in digestion which always follows its use is one of its prominent features and it is therefore also adapted to all forms of malnutrition in old and young. It is not my purpose in this paper to quote particular cases treated, but simply to direct attention to ANGIER'S PETROLEUM EMULSION of those who may not have learned of it and especially to those physicians who are prescribing cod-liver oil, but who desire something more efficacious and more acceptable to the patient's palate and stomach.

Pottsville, Penn. J. D. ALBRIGHT, M. D.

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PASSIFLORA IN PUERPERAL CONVULSIONS.—January 14th, 1896, I was called to see a woman taken to be confined. I reached the house about eight o'clock, p. m. Patient was sitting by the fire when I entered the room. Upon being addressed, she had a full convulsion falling to the floor. I had her placed in bed and gave her a quarter of a grain of Morphine Sulph. hypodermically. She was robust and healthy in appearance, had been married two summers, had had no children. Parties present said patient had had five spasms before my arrival. I made digital examination; found os dilated but very little. Waited about thirty minutes when she had another convulsion, seemingly harder than before. I repeated the morphine, one-fourth grain hypodermically thinking that would arrest the convulsions for a few hours, at least, but in thirty or forty minutes another convulsion came on. This put me to thinking. Knowing that the morphine was hindering dilation I decided to discontinue that drug and resort to something else. I gave her Peacock's Bromides and Norwood's Tincture of Veratrum in full doses but convulsions continued. I asked for consultation. A brother physicion was called in; he suggested chloral in ten-grain doses which he administered, but it was not retained on the stomach. Made digital examination; found os dilated about the size of a quarter of a dollar. Patient was seized with another convulsion, lasting about usual length of time—about two minutes. My brother made mention of bleeding which I do not advocate, though I admit that my brother had good authority. I objected, telling him we would soon get dilation enough to apply forceps—which we did—and after administering chloroform applied forceps, and delivered her a fine boy with very little trouble, but convulsions continued at regular intervals. We had but very little hemorrhage. My brother suggested we administer Morphia hypodermically. We gave the patient three-quarrers of a grain in the course of an hour and a half, with no effect. I had a bottle of DANIEL'S CONCENTRATED TINCTURE PASSIFLORA INCARNATA at my office, which I suggested. He had no experience with the drug, neither had I, but we agreed. I returned to my office, got the bottle, gave her one teaspoonful every thirty minutes. Convulsions became lighter after first dose, and patient had no more convulsions after four doses had been given. I then ordered the medicine to be given every three hours. Patient made a rapid recovery and both the mother and child are in excellent health to-day. I hope that this article may stimulate the older members of the profession to study the merits of this drug more closely, and help the younger members, as it did me, out of a very unpleasant situation.

O. B. WALKER, M. D., Point Peter, Ga.

THE ATLANTA RETREAT.—A private Hospital for Medical and Surgical cases, with special provisions for drug habitues. Staff: W. P. Nicolson, M. D., Surgery; R. R. Kime, M. D., Gynecology; W. L. Champion, M. D., Genito-Urinary and Rectal Diseases; Bernard Wolff, M. D., Skin Diseases and Cancer; C. C. Stockard, M. D., Drug Habits. Consultants: J. S. Todd, M. D., General Medicine; Hugh Hagan, M. D., Nervous Diseases; A. W. Calhoun, M. D., Eye, Ear, Nose and Throat; F. S. Bourns, M. D., Pathology and Bacteriology. For particulars address Dr. C. C. Stockard, Superintendent, 103 Walton street.

PAROTITIS.

In a case of unilateral parotitis. with carious teeth, Dr. Eshner prescribed:

℞. Belladonna ointment.....
Mercurial ointment..equal parts.
Mix. Apply topically morning and night.

And:

℞ Cinchonidin salicylate, 1 drachm.
Divide in twenty tablets.
Dose. One every three hours.
—*Philadelphia Polyclinic.*

ADMINISTRATION OF CREOSOTE.

The *Journal des Practiciens* recommends the following formula for the administration of creosote, the prescription being put up in cachets:

℞. Creosote.....
Benzoin.....of each 15 grains.
Powdered charcoal..1½ drachms.

Triturate the creosote and the benzoin for a moment together and add by degrees the charcoal. This mass is then to be divided into five or ten cachets, each one of which will contain a proper dose. It is claimed that this prescription is very well borne by the stomach.

WAMPOLE'S
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(Compound Licorice Powder, U. S. P.) In Liquid Form. No Griping. No Constipating after effect. Each Teaspoonful representing a drachm of the Co. Liq. Pwd. U. S. P.

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(Powerful Uterine Tonic.) Containing Guiacum, Asparagus, Parsley, Blackhaw (bark of root) and Henbane.

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THE

Southern Medical Record.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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Original Articles.

IRON IN FUNCTIONAL NERVOUS DISORDERS.

S. G. COURTNEY PINCKNEY, M. D., ATLANTA, GA.

Lecturer on Diseases of the Mind and Nervous System, Southern Medical College.

Anæmia is a very constant condition in hysteria and neuasthenia; often the result, it is more frequently the determining cause of the attack. In the emaciated and feeble its presence is immediately noted, while in the stout and apparently physically robust it is frequently unsuspected.

A careful examination of the blood will show that even in this last class the hemæglobin is markedly diminished as a rule. Stout and well-nourished as they appear they are constantly in a state of physical exhaustion with a feeble muscular system and lowered resisting power, padded out with loosely packed masses of physiologically inert fat—fat showing no tendency to undergo proper metabolism—they are anything rather than the healthy people they seem to be.

It is in this type that treatment is so frequently unsatisfactory, principally because the physical deterioration is apt to be overlooked. Routine rest and feeding is rarely used, as it is in the palpably asthenic cases. The tendency seems to be to regard them more as lithæmics than neurasthenics, and exercise and abstemiousness are unduly insisted upon.

It is in this very class of patients so resistant to most methods of treatment that iron gives us brilliant results; in fact iron with a mild saline water in the morning is generally quite sufficient to effect a cure. Even modification of mode of life is rarely necessary, though massage is a very valuable adjunct giving us all the good effects we look for and so rarely see in the thin and exhausted cases. That characteristic con-

dition aptly called "plethora" is certainly a rare one in this age; its modern prototype "hyperæmia" is in reality an anæmia.

It is not sufficient to simply replace the lost hemæglobin—iron should be kept up (in diminished doses) for at least a month after the hemæglobin percentage is normal. We are apt to lose sight of its other good effects if we only think of it in relation to the blood count. Under its use the appetite is rapidly increased, the heart's action becomes stronger, sleep and digestion are better and mental weariness is lessened. As these symptoms are due to malnutrition, we would expect their disappearance with an improvement in the quality of the blood; it is a clinical fact, however, that their improvement appears long before there could be any appreciable change in the blood—often in the first or second day. It is rarely necessary to use any other stimulants of appetite or digestion, and neither necessary or advisable to advise digestive ferments or prepared foods.

I have had good success with Dialized Iron, and with Sulphate of Iron (in form of Blaud's pills), but I prefer Gude's Pepto-Mangan to either. The disagreeable effects of iron are the head symptoms and constipation. Head symptoms are rarely, if ever, present while using Pepto-Mangan, and the constipation is much less than with other preparations often only lasting for the first few days.

The commercial Blaud pill has about the consistency of a cobble stone, probably about its virtues as a remedy. If Blaud's formula is desired it should be put up fresh and dry in capsule form. The efficiency of iron is increased by a saline before breakfast—preferably Sulphate of Soda in a full glass of hot water. Several quarts of any pure water drunk through the day is of distinct advantage.

THE NOSE—ITS GENERAL CARE AND MANAGEMENT.

BY A. BETHUNE PATTERSON, M. D., ATLANTA, GA.

As to the anatomy of the nose little need be said. The septum, or partition of the nose extends back to the posterior nares, and the pharynx or upper throat. The anterior portion of this upright partition is composed of cartilage, the posterior is of bone. On either side of the nasal cavities are three bony shelves, or projections, which stand out towards the septum, or middle partition, and are technically known as turbinate bodies. In normal conditions they do not extend far enough to touch the septum. They are designated as superior, middle, and inferior turbinates.

Opening into the nasal cavities are several canals, which communicate with important sinuses, or bony cellular chambers, found in the osseous structures bounding the nasal cavities.

Embedded in the mucous membrane are serous and mucous glands. The ducts, extending from them, open on the surface and between the ciliated epithelial cells; the latter are delicate structures forming the outer covering of the membrane.

The olfactory nerve filaments terminate in the mucous membrane covering the upper and superior part of the middle turbinate body; these are the nerves of smell. All odoriferous substances must reach the nerves by first being incorporated in the secretion covering the membrane.

The air, on passing through the nose, is warmed, moistened, and filtered of dust and other foreign particles; the hairs, found in the anterior nares, assist in this latter process.

I will now refer briefly to the four principal subdivisions of nasal catarrh. The word catarrh, to the professional mind, means inflammation of mucous membrane, never mind where found. To the unprofessional, this term has quite a different meaning; it is significant, not only of local trouble, but of constitutional infection, and considered incurable.

Acute catarrh is inflammation of the mucous membrane of the nose, or "cold in the head," which is often of a few days duration, while in many cases, it is characterized by recurrences; so the term "taking fresh cold" is quite common. This stage of catarrh deserves far more attention than it receives either from the physician or laity, from the fact, in my opinion, it is one of the principal causes of the other varieties.

Mothers and nurses should be taught the importance of early correcting or arresting catarrh in this stage. First by regulating diet, not overfeeding, proscribing candies, cakes, and the so-called rich foods, by not overclothing, and coddling the throat or neck, and keeping the apartments well ventilated.

Early in my practice, I learned that laxatives and tonics were the remedies for breaking up the habit of taking cold. I am now satisfied they are indispensable auxiliaries.

Recurrent attacks of acute catarrh lead to chronic hypertrophic, and atrophic varieties.

Cleansing the nose is an important adjunct in arresting the acute stage. Children should be instructed as early as possible in cleansing the nose with a weak solution of warm salt-water, or Dobell's solution, snuffed from the palm of the hand, or sprayed with an atomizer; this should become a part of the morning's toilet, and repeated several times during the day, accompanied with frequent use of handkerchief. When the acute stage has passed into the chronic and hypertrophic, cleansing becomes the most important home treatment.

The secretion from the glands and follicles becomes vitiated,

thick, and tenacious, a medium in which germs of fermentation rapidly develop, becoming an additional source of irritation. When the mucous surface is kept clear of these, the tendency is to recovery.

In hypertrophic catarrh the mucous membrane becomes swollen and thickened, often blocking up the nose, obstructing free respiration and secretion, the latter often regurgitates into the upper pharynx, or throat, and either hawked and spat out or swallowed; in children it is more generally swallowed, also in adults while asleep. It is the general belief, that when the fermentative matter enters the stomach, it establishes fermentation, and dyspeptic symptoms, as well as blood troubles.

Nasal obstruction leads to mouth-breathing, which is a pernicious habit, often setting up pharyngeal, laryngeal, and bronchial irritation, besides the impairment of the voice, which must necessarily follow. Close and badly ventilated rooms, which are too often filled with tobacco smoke, intensifies every stage of catarrh and increases the suffering.

In atrophic catarrh the mucous membrane wastes away, becomes thin, the glands and follicles are destroyed, they no longer secrete mucous in quantities to moisten the nasal surfaces, it is greatly reduced it quickly dries, forming scabs, which become the home of putrefactive bacteria; the odors emitted are very offensive. The suffering is intensified by patches of ulceration, which underlie the scabs. The sense of smell is impaired and frequently destroyed. Atrophic catarrh is incurable; all that treatment can do, is to ameliorate the suffering, and make patients comfortable, which means daily treatment by washes and sprays of a cleansing character, as well as remedies which improve the general health, for constitutional tendencies play an important part in atrophic catarrh.

The frontal, sphenoidal, and maxillary sinuses frequently become complicated by an extension of catarrhal inflammation from the nasal cavities, and require treatment, which often proves unsatisfactory.

Nasal catarrh becomes the starting-point for pharyngeal, laryngeal, and bronchial catarrh.

The eye is often infected from the nose, the germs are transmitted through the lachrymal ducts; inflammatory and ulcerative affections of the conjunctiva and cornea are rendered more hazardous by this source of infection.

The eustachian tubes, which lead from the middle ear, open into the upper pharynx, in close proximity to the posterior nares. Nasal catarrh readily extends into the throat and through the tubes into the middle ear, and culminates in serious ear trouble.

I wish to urge the point of arresting catarrh in the acute

stage. My co-workers will bear me out in saying, that only a very small percentage of acute catarrh in children is brought for treatment. It becomes the duty of practitioners to impress upon those who have the care of children the importance of early and prompt treatment.

Picking the nose with the finger is a habit not confined to the nursery, but it is quite common in adults. It invariably leads to superficial ulcerations, on the septum, just inside the vestibule; these ulcers often become the starting-point to perforations, and frequently the entire destruction of the cartilaginous portion of the septum. The scabs or dried secretion should not be removed by the finger, but should first be moistened and loosened by warm alkaline lotions snuffed up the nose, or sprayed; then blown out. Boracic acid ointment applied to the inner nose is very soothing.

I can not be far from wrong in stating that prophylaxis in nose and throat catarrh should command our attention, if for no other purpose than the prevention of consumption, which is often contracted from the air, through abraded and nude mucous surfaces of the respiratory organs.

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Parke, Davis & Co.'s

Anti-diphtheritic Serum,

Special,

750 units per Cc.

There is no additional charge for this high potency serum over that of our regular stock.

THE ONLY PERFECT PACKAGE.

Hermetically Sealed Bulbs.
Not ordinary Vials and Corks.

XUM